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PROCEEDINGS

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of
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SOCIETY AFFAIRS

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AMERICAN SOCIETY OF CIVIL ENGINEERS

PROCEEDINGS

VOL. LII

AUGUST, 1926

No. 6

SOCIETY AFFAIRS

"NEWS AND NOTES" AS A PART OF PROCEEDINGS

Innovation in Society Publications

For the first time in its history, *Proceedings* comes to members, in this issue, in two parts. As a newcomer in any family is always a fair subject for discussion, it is worth while in the present instance to inquire "how come?"

The issuance of a pamphlet in more familiar and less formal style has been the subject of much thought for several months. The exact form and details have been carefully considered.

Motives

Broadly speaking, the thought behind this innovation has two objectives. The first and major one is to acquaint members with the activities of the Society in a manner that the more formal publication cannot convey, revealing to them the more intimate workings of the organization, its business details, and the variety of its activities and professional contacts.

The second desideratum centers about an effort to carry in each issue of such a bulletin a story which in an indirect way would indicate the part that the engineer plays in the progress

of civilization, and which may be found (at times) of sufficient merit—it is hoped—to be quoted by some of the more widely distributed popular type of periodicals.

A Nickname

Hence the "News and Notes", as it may be familiarly spoken of, now becomes an essential part of *Proceedings*. "Proceedings, Part 2" is its official designation, according to the regulations of the Postal Department, but perhaps, in the family, one may prefer the more intimate nickname. The newcomer after all is only a little fellow, (as yet) and its space will not permit of the full discussion of any problem, so that frequent notices and references must be made to Part 1, the original *Proceedings*, where more precise and complete information can be found.

Give "News and Notes" your careful scrutiny and let it be the subject of your comment that thereby it may become a worthy member of a worthy family.

Seattle Meeting

If any member attending the Summer Meeting of the Society at Seattle, Wash., July 14-16, 1926, did not learn the fundamental and a great many of the details of the logging industry, it was because of inattention to the varied program covering all phases of this large topic, as presented by many experts. Not content with this generous

description of the entire process, the program provided an absorbing visit to one of the larger lumber plants at Snoqualamie Falls which gave a visual demonstration of many of the principles involved.

The meeting started auspiciously on July 14, when Col. W. J. Barden, President of the Western Washington Section

of the Society, introduced Governor Roland H. Hartley of the State of Washington, and Mayor Bertha K. Landes of Seattle. Following the response by President Davison, many of the details of lumbering were treated in succession by J. J. Donovan and Walter J. Ryan, Members, Am. Soc. C. E., and Messrs. K. Berger, U. B. Hough, H. G. Cowling, and W. T. Evanson.

This same general topic was continued in the afternoon with papers by Messrs. Bror L. Grondal, L. D. Beach, E. T. Allen, and J. B. Woods, the whole day forming a most complete and instructive treatment of a question which is so near to the engineers of the Northwest.

The following day, Thursday, July 15, was devoted entirely to programs by each of the eight Technical Divisions of the Society. These meetings were all characterized by the scope and excellence of the papers and by the intense interest of the members in attendance.

Excursion to Snoqualmie Falls

The all-day excursion on Friday to the Snoqualmie Falls Lumber Company, besides giving a delightful trip into a beautiful part of the Cascade Mountains, gave a welcome change from the intense technical program preceding it and reinforced many of the impressions of logging and lumbering previously gained. It made a delightful conclusion to a successful meeting.

Besides this trip various other social functions were thoroughly enjoyed by both members and guests. These included an informal dinner on Wednesday evening, and a dinner dance on Thursday evening, both at the Hotel

Meetings of the Board of Direction

This is an abstract of the notes of the Secretary and subject to approval by the Board of Direction at its next meeting.

Meetings of the Board of Direction were held on April 12 and 13, 1926, at the Kansas City Athletic Club, Kansas City, Mo., previous to the Spring Meeting, the following being in attendance: President George S. Davison; Secretary George T. Seabury; and, also, Messrs. Braune, Brown, Chevalier, Dewell, Farnham, Gilman, Grunsky, Hammond, Hatton, Howe, Huber, Humphrey, Ketchum, Maitland, Merriman, Paul, Raymer, Robert Ridgway, Sawyer, and Taber.

Olympic, besides various other entertainments for the ladies, including drives and luncheons.

Attendance

The total registration was about 400. The approximate attendance at all the sessions was as follows: Main Sessions on Logging and Lumbering, 300; City Planning Division, 35; Highway Division, 40; Power Division, 85; Structural Division, 70; Construction Division, 70; Irrigation Division, 25; Sanitary Engineering Division, 30; Waterways Division, 25; Informal Dinner, 300; Dinner Dance, 125; Three Excursions, 240. More than 200 attended a splendid excursion arranged by the Great Northern Railway on Saturday to its new Cascade Tunnel.

Special Parties

Among the special groups attending this meeting was one of the Los Angeles Section which came by special boat; another, a special tour for the benefit of Eastern and Middle Western members and friends, organized by Henry Tours, Inc. About 16 people left New York on July 3. Other additions to the party were made en route, so that eventually the special cars carried 39, including members and their families.

Previous to the meeting, the party enjoyed delightful stays at Glacier and Rainier National Parks, and following the meeting, was to visit Alaska and return by way of the Canadian Rockies to reach New York again on August 5. At the meeting, many commendations of this trip were heard, and the hope was freely expressed that a similar tour would form an essential part of all future meetings of the Society.

New Badge for Juniors and Students

A new style of badge was adopted for Juniors and Students. These badges are to be of the same size and shape as the present Corporate Membership badge. They differ from the standard emblem, in that each has a $\frac{1}{2}$ -in. white enamel border. The inside field for the Junior badge is to be of blue enamel, whereas the field of the Student badge is to be of maroon.

Code of Ethics

In accordance with action at the meeting of January, 1926, a copy of the Code of Ethics is to be sent to every newly elected member upon qualification and to the present membership upon individual request. Copies suitable for framing and display were approved.

Fifty-Seventh Street Property

The Committee which was authorized to act in negotiating a leasehold of the Fifty-Seventh Street property of the Society reported that it had negotiated a proposed lease to the Broadway-John Street Corporation, for a term of approximately 66 years.

Under these negotiations, the term of the lease proposed would begin on July 1, 1926, and terminate on December 14, 1991, with a net rental, to December 14, 1928, of \$35 000 per annum; and for the period thereafter to December 14, 1949, with a yearly net rental of \$52 500; and for the period thereafter to December 14, 1970, at a yearly net rental equal to 5½% of a revaluation of the premises treated as vacant land, but not less than the yearly net sum of \$52 500; and for the period thereafter until December 14, 1991, at a yearly net rental equal to 5½% of a revaluation of the premises treated as vacant land, but not less than the yearly net sum of \$52 500.

After discussion the form of the lease was presented, approved, and the Secretary, through the Society's Counsel was authorized to make a petition to the Supreme Court of the State of New York for the necessary leave to execute the lease, upon the receipt of which the President was authorized and ordered to execute and deliver, on behalf of the Society, a lease of the Fifty-Seventh Street property to the Broadway-John Street Corporation, upon the terms as outlined.

Committee on Technical Procedure Made a Standing Committee of the Board

At its meeting on January 18, 1926, the Board authorized a Committee on Technical Procedure, to consist of the Chairmen of Technical Division Executive Committees; the Chairman of the Research Committee; Chairman of the Committee on Technical Activities and Publications; and two other Directors; Messrs. Braune and Chevalier were appointed as the two other members of the Board.

The President and Secretary of the Society will act as Chairman and Secretary of the Committee.

Election of Secretary, Treasurer, and Assistant Treasurer

In accordance with Article III, Section 3 of the By-Laws, the appointment of a Secretary, Treasurer, and Assistant Treasurer of the Society was brought up. Mr. George T. Seabury was re-appointed Secretary, at a salary of \$12 000 per year, and Messrs. Otis E. Hovey and W. J. Boucher were re-appointed Treasurer, and Assistant Treasurer, respectively.

Future Meetings

In accordance with the recommendations of the Committee on Technical Activities and Publications, the following schedule of meeting places for 1927 was definitely adopted:

1927

Spring Asheville, N. C.
Summer Denver, Colo.
Fall St. Louis, Mo.

The following tentative schedule of meetings for 1928 and 1929 was approved:

1928 (Tentative)

Spring Washington, D. C.
Summer Buffalo, N. Y.
Fall San Diego, Calif.

1929 (Tentative)

Spring Galveston, Tex.
Summer Milwaukee, Wis., or Duluth, Minn.
Fall Boston, Mass.

Monthly Bulletin

The report of a Joint Meeting of the Committee on Aims and Activities and the Committee on Technical Activities and Publications, recommending a *Monthly Bulletin* was adopted, and \$2 500 was appropriated for its cost for the remainder of the year. The report of the Committees is as follows:

"March 15, 1926.

TO THE BOARD OF DIRECTION,
AM. SOC. C. E.

"GENTLEMEN.—At your meeting on January 18, 1926, there was referred to the Committee on Technical Activities and Publications and the Committee on Aims and Activities for joint consideration, with the Secretary, the question of the issue by the Society of a *Monthly Bulletin*.

"Your Committees now beg to report as the result of a meeting held on March 15, 1926, as follows:

"That *Proceedings* should be published in two parts: Part No. 1 to contain the same material as at present with the exception that certain of the news items would appear in Part No. 2. Part 1 would continue, as in the past, to be the official organ in which appear the proceedings of the Society.

"Part 2 would contain matters of general interest lifted from Part 1, and also such other matter as will tend to illustrate and emphasize the activities of the Society, of the Divisions, of the Local Sections, of the Student Chapters, and all other related matters. Part 2 would be made up of 8½-in. by 11-in. size in the most attractive form possible and its contents would be prepared with the deliberate purpose of attracting attention to and emphasizing the importance of the more detailed items appearing in Part 1, and of stimulating interest in Society affairs.

"The arrangement of the matter now presented under the heading 'Items of Interest' in the *Proceedings* should also be typographically modified so as to present a better appeal to the eye and to those readers who are not necessarily particularly interested in every phase of each subject presented.

"It is believed that the foregoing suggestions, which will involve an additional total annual cost of approximately \$5 000, will tend to stimulate interest and so will be of advantage to the Society. It is the belief of your Committees that the changes herein suggested should be approved by the Board.

"It also seems desirable that the physical make-up of Part 1 of *Proceedings* as above recommended, should be such that each number may be readily separated into its three major parts. In such manner the convenience of those members who desire to save any particular part will be served.

"All of which is respectfully submitted.

"THADDEUS MERRIMAN,

"For the Committee on
Technical Activities and
Publications,

"CHARLES H. PAUL,

"For the Committee on
Aims and Activities."

New Rules for Admission of Student Chapters

In addition to admitting five new Student Chapters (see page 366), the

rules for admission of Student Chapters (Society By-Laws, Article 5, Section 2), were amended and expanded to read as follows:

"2.—The qualifications required of a proposed Student Chapter of the American Society of Civil Engineers shall include:

"(a) An organization of students in an engineering school of approved standing.

"(b) The endorsement of the application by the head of the civil engineering department.

"(c) A minimum membership of twelve students.

"(d) The engineering school must be one that grants the degree of Bachelor of Science in Engineering or its equivalent.

"(e) The entrance requirements of the engineering school shall be either upon certificate of accredited preparatory schools or colleges, or upon passing examinations similar in character to those given by the College Entrance Board.

"(f) The curriculum of the Junior and Senior years must require at least one-half the time devoted to purely engineering subjects.

"(g) The engineering school must have had at least one hundred graduates in engineering and architecture combined before making application for a Student Chapter. The term, engineering, as used includes civil, military, naval, mining, mechanical, electrical, and other professional engineering subjects."

Water Resources of the United States

A resolution relating to an inventory of National water resources was adopted, as follows:

"Whereas, much of the progress of the United States is dependent upon a proper development of the water resources, available but as yet undeveloped; and

"Whereas, such development should be stimulated, not only to produce additional irrigated areas with their attendant homes and valuable crops, but to conserve fuel supplies by the substitution thereof, so far as possible, of water powers; and

"Whereas, a complete inventory of the water resources of the United States is recognized by the Engineering Profession to be necessary for the furtherance of such development; therefore be it

"Resolved by the Board of Direction of the American Society of Civil Engineers, assembled in regular meeting this twelfth day of April, 1926, at Kansas City, that the endorsement of this Board, representing the Society's membership, be given H. R. 9397, 'A bill to provide for an inventory of the water resources of the United States, and for

other purposes', now pending before the Congress; and be it further

"Resolved that it is the opinion of this Board that that feature in the bill providing for co-operation between the United States and the individual States, or other agencies, is essential to the proper carrying out of this development; and be it further

"Resolved, that copies of these resolutions be forwarded to the Chairman of the Committee on Interstate and Foreign Commerce of the House of Representatives."

Meeting of the Executive Committee

The Executive Committee met on June 11, 1926, at 10:30 A. M., at Society Headquarters; President George S. Davison is the Chair; George T. Seabury, Secretary; and present, also, Messrs. Allen Hazen, Richard L. Humphrey, Robert Ridgway, and Treasurer Otis E. Hovey. A number of important matters were considered, including the appointment of representatives of the Society on various committees and delegates to meetings of various technical associations. Other matters were referred to the Board of Direction for action at its meeting in Seattle, Wash., on July 12 and 13, 1926.

Committee on Technical Procedure

A Committee on Technical Procedure was instituted as a Standing Committee of the Board of Direction at its January meeting. As now organized, the personnel of this Committee, together with the particular sub-division of the Society represented, will be as follows:

W. J. Barney, Construction Division,
G. M. Braune, Director,
Clement E. Chase, Structural Division,

Willard T. Chevalier, Director.

C. D. Curtiss, Highway Division,

Joseph Jacobs, Irrigation Division,

Milo S. Ketchum, Chairman, Research Committee,

Morris Knowles, City Planning Division,

C. W. Kutz, waterways Division,

Thaddeus Merriman, Chairman, Committee on Technical Activities and Publications,

F. W. Scheidenhelm, Power Division,
William L. Stevenson, Sanitary Engineering Division.

In addition, the President and Secretary of the Society are also members and will act as Chairman and Secretary, respectively, of the Committee.

The function of this Committee is to co-ordinate all the technical activities of the Society. At its first meeting, held at Kansas City, it made recommendations to the Board of Direction on several matters which had been referred to it and also on matters to which it believed consideration should be given.

Probably the outstanding feature of its first meeting was the formulation and adoption of a "Code of Technical Procedure", a careful reading of which is recommended to all members of the Society as expressing in concise form the structure of the Society's organization for the treatment of all technical matters.

"CODE OF TECHNICAL PROCEDURE"

"After extended discussion the following Code of Technical Procedure was adopted:

"I.—One of the fundamental objects of the Society is the advancement of the science of engineering in its several branches.

"II.—Transactions is the agency through which such advances and accomplishments as are considered to be of moment are presented to the membership in permanent and concise form.

"III.—Proceedings is the agency which elicits discussion of reports and papers and which presents to the membership a record of current Society news and activities.

"IV.—Society prizes are awarded so as to accord recognition to papers of outstanding merit, to the end that individual effort may be encouraged.

"V.—It is the purpose of the technical meetings to provide a forum and place of assembly for members so as to induce the

interchange of ideas and constructive discussion on subjects of educative value and professional benefit.

"VI.—It is the function of the Technical Division to assume leadership in matters embraced within its specialized field; more specifically its duties include:

(A)—To originate and upon assignment to make inquiry in directions inadequately developed.

(B)—To survey the field and record advances and improvements as they are made.

(C)—To elicit authoritative papers on important phases within its field.

"VII.—It is the function of a Special Committee of the Society to undertake:

(A)—A research or investigation into an assigned specific problem by conference, by study and by experiment, and to develop that problem to as definite a conclusion as practicable, reporting on the same for the benefit of the membership at large.

(B)—A prominent part, either individually or with other similar groups, in the development of subjects assigned, in which the membership has a professional interest not necessarily purely technical, or, being technical, not entirely within the control of the professional engineer.

"VIII.—It is the function of Society Representatives on other bodies to guide the latter so far as may be to conclusions based on sound engineering practice and principles and, where it shall be proper, to the advancement of the professional engineer in accordance with the ideals of the Society.

"IX.—It is the function of the Board of Direction to determine all the affairs of the Society as defined in the Constitution.

"X.—It is the function of the Executive Committee of the Board

of Direction to guard the finances of the Society and to guide and direct the activities of those Special Committees of the Society that may be assigned to it as engaged in the development of problems not specifically of a research character.

"XI.—It is the function of the Technical Activities and Publications Committee to guide and control the contents and policy of the Society's publications and to have administrative oversight of the place and character of all Society and Division meetings.

"XII.—It is the function of the Research Committee to guide and direct the activities of those Special Committees of the Society engaged in research that may be assigned to its supervision.

"XIII.—It is the function of the Committee on Technical Procedure to effect co-ordination of all the technical activities of the Society. To this end it adopts the following principles:

(A)—The Committee understands itself to be advisory to the Board of Direction both as to matters which the Board may refer to it and also as to technical matters on which, it feels, it should originate recommendation.

(B)—The Committee deems that it may address the Board with respect to the work of the Standing Committees of the Board of Direction upon matters pertinent to the technical activities of the Society.

(C)—The Committee is of the opinion that the originating of technical activities is the function of the Technical Divisions and others, but that it is the duty of the Committee to make recommendations to the Board of Direction in regard to such technical activities whenever such action appears advisable.

"XIII (Continued)

(D)—The Committee requests that there be referred to it all projected activities of the Technical Divisions—their scope, intensity, and merit. The Committee also requests that report be made to it annually as to the status of the activities of the Technical Divisions.

(E)—The Committee adopts the general procedure that at its Spring meeting it will review the technical activities of of the past year, and that the main purpose of its Fall meeting will be to prepare recommendations with regard to the technical activities for the coming year."

Lease of Society Property

The long-term leasehold of the property of the Society at 220 West 57th Street, New York City, the final papers for which were signed on June 11, 1926, by authority of the Board of Direction, is a matter in which members may take great satisfaction.

The property has been under lease to the Ajax Rubber Company for a term expiring on December 14, 1928. Offers to the Society during 1925 indicated that there was a very active demand for property in that neighborhood and accordingly such inquiries were encouraged. The Board at its meeting in October, 1925, adopted the principle that a leasehold was preferable to a sale and appointed a committee of three, consisting of Messrs. Lincoln Bush, *Chairman*, Ira W. McConnell, and Francis Lee Stuart, to consider the matter aggressively.

Terms

At the time of the January, 1926, meeting, this Committee presented to the Board four definite offers of which the Board selected one, giving certain instructions to the Committee to continue its activity looking toward a closure. Subsequently, under the instructions of the Committee, the Secretary entered into a preliminary agreement with the Broadway-John Street Corporation under which the latter agreed to rent the property for a term beginning July 1, 1926, and expiring December 14, 1928 (the date of the expiration of the Ajax

lease), at an annual net rental of \$35 000 and for a term beginning on December 15, 1928, and running 21 years at an annual net rental of \$52 500.

This to be followed by a second term of 21 years and a third term of 21 years, each at an annual net rental equal to 5¼% on the re-appraised value of the property treated as land alone, but in any event to be not less than \$52 500. Approval of the proposition by the Supreme Court of the State of New York having been granted, the final papers were signed and passed on June 11, 1926, at which time the Society received a certified check in the amount of the additional rental due for the period between July 1, 1926, and December 14, 1928; and a National Surety Company Bond guaranteeing the rent for the first year of the new term in the amount of \$52 500, and further guaranteeing to deliver before the expiration of that year a second bond guaranteeing the like rental of the second year.

Under the terms of the lease a similar bond is to be given each year guaranteeing in advance one full year's rental until there shall have been erected upon the property a building which it is stipulated shall cost not less than \$500 000 and shall be subject in all particulars to the approval of the Society.

Further, under the terms of the lease, the Society is not required to assist in the financing of the new structure which, it is provided, must be adequate to earn both the annual net rental stipulated and the costs, including taxes, assessments, depreciation, repair, and operation, all of which costs are to be paid by the lessee, leaving the Society free from all obligations and in receipt of the stipulated net annual rental.

Restrictions

In addition the lease requires that adequate insurance is to be carried for the benefit of the Society and of the lessee, and that the structure is to be delivered at the expiration of the term in good and working condition. Not only is the Society not required to assist in the financing of the new structure, but express provision is made under which the Society's mortgage may be continued until December 14, 1933.

Frequent provisions are made for arbitration, as, for instance, in connection with the re-valuation of the property to be made at the expiration of the first 21 years and the first 42 years. Under such arbitration agreement, if it is not practicable for the two principals

to agree, each party is to name an arbitrator; if these are unable to agree, they are to name a third arbitrator whose decision shall be binding upon both parties.

It will be noted that the new lease is subject to the present one under the terms of which rental is payable by the Ajax Rubber Company up to and including December 14, 1928, or in the event of failure on its part to do so, by the Broadway-John Street Corporation, which has already paid in the differential between the Ajax lease rate of \$22 703.32 and the new rental figure of \$35 000 per annum, which differential will be adequate for the payment of the expenses incident to the transaction.

Increased Value

The Committee feels that the Fifty-seventh Street neighborhood is already enhanced in value by the physical improvements which are proposed for this vicinity. Among the projects mentioned during the past year are the eastern terminus of a new bridge across the Hudson; the new Metropolitan Opera House; and a new belt-line railway connecting New Jersey and Manhattan. These, it is believed, have created a demand for property in this neighborhood such that the present seems to be the most opportune time for the consummation of a long-term lease. Especially is this true since the present lease expires within $2\frac{1}{2}$ years, one year at least of which would be required prior to its termination for the proper selection and closure with a new tenant.

The net annual rental may be considered as capitalized at whatever rate one feels to be proper, but on most assumptions will imply for the first term an average value of the Society's real estate in that location of not less than \$1 000 000.

These new arrangements bear pointed witness to the wisdom and foresight of those who acquired this property. It is fair to expect that the plans just perfected will have as happy an outcome for the future of the Society.

New Student Chapters

The latest additions to the list of Student Chapters as approved by the Board of Direction at its meeting April 12, 1926, includes the following: Ohio Northern University, Ada, Ohio (Ohio Northern Civil Engineering Society); University of Florida, Gainesville, Fla. (Society of Engineers); University of Idaho, Moscow, Idaho; Case School, of

Applied Science, Cleveland, Ohio (Stadia Club); and the University of Dayton, Dayton, Ohio.

George S. Davison, Sc.D., D.Eng.

In June, President Davison had the unusual distinction of receiving two honorary Doctor's degrees. In his native city, the University of Pittsburgh gave him the degree of Doctor of Science on June 9, 1926, because of his valuable and extended services to the community; less than a week later, on June 14, Rensselaer Polytechnic Institute, his Alma Mater, bestowed on him the degree of Doctor of Engineering, the Institute thus honoring one of its graduates who has been foremost in giving attention to its affairs, and whom it deems worthy for his more general professional accomplishments.

Members of the Society, whether or not personally acquainted with President Davison, will unite in congratulating him on these well deserved tributes.

May Society Meeting

That engineers are vitally concerned in many matters relating to the action of cement and concrete was very evident from the attendance and interest in the Society Meeting held on May 5, 1926. The subject was entitled "Corrosion of Concrete" and was explained by John R. Baylis, Assoc. M. Am. Soc. C. E., who based his remarks on his paper printed in the April *Proceedings*.

Mr. Baylis treated the question largely from the standpoint of the chemist, showing the various actions which occur during the setting and curing of cement and the effects of the many chemical constituents of the mass. He illustrated his viewpoint by a series of photographs and diagrammatic sketches.

Following Mr. Baylis, Messrs. Nathan C. Johnson, Assoc. M. Am. Soc. C. E., and Thaddeus Merriman, M. Am. Soc. C. E., gave extended discussions with lantern slides; Mr. Johnson utilized a piece of home-made apparatus to illustrate some of his points. Further discussion was offered by other interested engineers including Messrs. John G. Ahlers, M. N. Clair, George L. Lucas, E. E. Halmos, and O. E. Mogensen.

The interest of the audience was sustained until the meeting closed about 10:15 p. m. Charles Gilman, Director of the Society, presided; the attendance was about 150.

Edward Dean Adams Increases Endowment of Engineering Foundation

A gift of \$100 000 by Edward Dean Adams, Fellow, Am. Soc. C. E., to Engineering Foundation and Engineering Societies Library was announced at the May 19 meeting of the Engineering Foundation. Mr. Adams was the guest of honor at the meeting and in appreciation of his service as Vice-Chairman of the Engineering Foundation for ten years was elected an Honorary Member for life.

The only other Honorary Member of the Foundation is the Founder, Ambrose Swasey, Hon. M. Am. Soc. C. E. Mr. Adams was presented with a beautifully bound and illuminated vellum book recording the testimonial and signed by all present and by former members of Engineering Foundation Board. The announcement of his large gift to Engineering Foundation came as a surprise.

June Society Meeting Discusses Passenger Street Traffic

As was to be expected, the Society Meeting of June 2, 1926, developed a broad response from many interested sources as to the ills of present traffic in city streets and their cures. The basis for the meeting was the paper entitled "Increasing the Efficiency of Passenger Traffic in City Streets" as presented by the author, John A. Miller, Jr., Assoc. M. Am. Soc. C. E.

Following Mr. Miller's brief summary of his paper as printed in the May, 1926, *Proceedings*, there was a continuous discussion for almost two hours on the part of members and guests, engineers and business men. Several members of the Society joined in the discussion, including Messrs. Harold M. Lewis, C. R. Harte, T. Kennard Thomson, J. R. Slattery, W. J. Shea, and Max Miller.

Additional valuable discussion was offered by William E. Thompson, Vice-President, Third Avenue Railway Company; Lieutenant William Loehmann of the New York City Police Force; Louis Deblois, of the National Bureau of Casualty and Surety Underwriters; E. N. Johnson, of the American Gas Accumulator Company; Charles Gordon, Editor, *Electric Railway Journal*; W. G. Strait, Vice-President, New York Railways; and H. H. Dunn, Engineer of the Beeler Organization. All the discussions were characterized by their

directness and brevity which enabled the variety of points of view to be readily presented.

As regards breadth of viewpoint, number of really valuable discussions, and economy of time, this meeting was probably the most successful of the year. Vice-President Allen Hazen presided, and preceding the delivery of the paper, the Secretary announced the results of the Second Ballot for nomination of officers of the Society canvassed on June 1, 1926. The attendance was about 75. The meeting adjourned at 10:25 p. m.

New Surveying and Mapping Division

A new Technical Division of the Society on Surveying and Mapping has been authorized by the Board of Direction and will be formally organized at the Annual Convention in Philadelphia, Pa., in October.

A Temporary Executive Committee is carrying on the preliminary work of the Division until the final official organization is perfected. Its members include the following: Messrs. William Bowie, Washington, D. C.; C. H. Birdseye, Washington, D. C.; Clarence T. Johnston, Ann Arbor, Mich.; R. S. Patton, Washington, D. C., and A. L. Vedder, Rochester, N. Y.

Members interested in joining this Division may be enrolled by written request to the Secretary of the Society.

President Boardman

On June 12, 1926, Dean H. S. Boardman, M. Am. Soc. C. E., was inducted into office as President of the University of Maine. The election of a Civil Engineer to become the head of a State University is, to put it mildly, unusual.

Engineers have made successful administrative officers for many large corporations but their qualifications for such high academic honors have been largely overlooked. This innovation, therefore, coming as it does from one of the conservative strongholds of America, is perhaps a sign of progress, of advance from the old accepted notions that the head of a university must be primarily a man of artistic culture rather than one trained in the useful constructive arts, dealing with hard facts and common sense.

The truth of the matter is that the ideal college president—a mythical personage—should combine all these admir-

able and many-sided qualities. Surely the training of engineers and their subsequent experiences in the world of hard realities must develop qualities which would go far to make up for some of their minor deficiencies in the more ornamental arts. As President Boardman begins his term he will carry the congratulations and well wishes of all his brother engineers, and, furthermore, their confidence in his success.

Appropos of the value of the engineer for large administrative work, especially as related to American railways, a recent issue of *Railway Age* notes the record of thirteen railway presidents who have retired within four years, of whom eleven were non-college men and two only were college graduates. As compared with this, it remarked that the thirteen successors include seven with college training and only six without it. A majority of the seven were educated as engineers; and this was not accidental.

A Banner Year for Membership Applications

A member interested in the Society growth would naturally keep a close watch of the lists of applications. Had he done so during the past few months, he would have noted a most interesting development. Including the preliminary list in this number of *Proceedings*, statistics for seven months of 1926 are available.

The total applications for 1926 to date number 988. Mere figures, however, are meaningless; but the comparison with applications for the similar period of the previous year gives a graphic idea of the current development. In all respects the year 1926 shows a marked advantage over 1925. A few significant percentages illustrate this:

Increase in number of applications	35%
Increase in applications for admission (prospective new members)	38%
Increase in applications for transfer	20%

Student Chapters

Of the 409 applications for admission listed in this *Proceedings*, about 152 (37%) are from late or former members of Student Chapters and may properly be credited to the latent interest remaining from college days. This single item of the activity of Student

Chapters constitutes a proof of their advantage to the Society.

But even if this one factor largely accounts for the increase for the month of August, it cannot explain the similar advantage of the previous months of 1926. Each applicant has his own reason for joining the Society. To one it may be the long awaited financial ability; to another the interest of friends; or the professional standing implied; or the work of Technical Divisions; or a visit to a quarterly meeting.

Membership is Attractive

Obviously, it is impossible to fix the preponderant cause, nor is it necessary. The main fact is that for some reason, or for many reasons, the Society is becoming increasingly attractive. This connotes a present substantial value to those already members and a prospective added value through the interest and efforts of these new members.

From any angle the increase in size is a source of pride. In organization life as in physical life, health and growth are synonymous. As the number of applications is in general proportionate to the growth in membership, the large increase for the current year must be most gratifying to members, indicating an added regard for the Society and a growing estimate for membership in it. The many members whose personal efforts are thus reflected in this notable expansion should feel great pride and satisfaction in their success.

Society Representatives

The following members have accepted the responsibility of representing the Society in various capacities:

Joint Committee on Stresses in Structural Steel: H. G. Balcom, Clement E. Chase, F. O. Dufour, J. H. Edwards, and L. J. Towne, Members, Am. Soc. C. E.

Unveiling of Bust of Eli Whitney, Hall of Fame, New York University, New York, N. Y., May 12, 1926; Robert Ridgway, Past-President, Am. Soc. C. E.

Annual Meeting, American Academy of Political and Social Science, Philadelphia, Pa., May 14-15, 1926: P. M. Sax, G. R. Tuska, and S. T. Wagner, Members, Am. Soc. C. E.

Annual Meeting, National Fire Protection Association, Atlantic City, N. J., May 10-13, 1926; Clement E. Chase, A. W. Cuddeback, Carleton E. Davis, William Chauncey Hawley, and W. L. Stevenson, Members, Am. Soc. C. E.

Annual Meeting, Society for the Promotion of Engineering Education, Iowa City, Iowa, June 16-18, 1926: Anson Marston, M. Am. Soc. C. E.

Additional Member to Society's Special Committee on Effects of Earthquakes on Engineering Structures: H. D. Dewell, M. Am. Soc. C. E.

Representatives of Society on Washington Award: Daniel W. Mead and Francis C. Shenehon, Members, Am. Soc. C. E.

Lumber Standardization Committee: J. H. Prior, M. Am. Soc. C. E.

Committee on Safety Code for Cranes, Derricks and Hoists: Charles C. Hurlbut, M. Am. Soc. C. E.; alternate, Carleton Greene, M. Am. Soc. C. E.

Student Prizes

The movement toward the awarding of a Junior Membership to some graduating student as a prize from each Local Section is gaining headway. In this number of *Proceedings* applications are listed from the following men who have the distinction of winning these prizes, together with the Local Section to whose generosity the awards are due:

Lewis M. Culver (University of Colorado) Colorado Section

Joseph M. Domas (Brooklyn Polytechnic Institute) New York Section

Robert D. Lambert (State University of Iowa) Iowa Section

Eldon H. Markel (Ohio State University) Central Ohio Section

Edward H. Ohlsen (Iowa State College) Iowa Section

Clifford C. Sievers (University of Idaho) Spokane Section

Robert T. Stanley (Oregon Agricultural College) Portland Section

Stanley F. L. Vallet (University of Missouri) Kansas City Section

Adrian H. Williams (Oregon Agricultural College) Portland Section

John P. Yates (University of California) San Francisco Section

In addition, prizes have been awarded to the following students but their applications have not been completed as yet:

Wendell Dawson (Oregon Agricultural College) Portland Section

E. M. Kniestedt (Washington University) St. Louis Section

Charles F. Smith (University of Utah) Utah Section

John H. Squires (Leland Stanford University) San Francisco Section.

There are fourteen other similar prizes in effect, of which the winners' names had not been forwarded by the Local Sections in time for the current Preliminary List.

Each of these prizes is for excellence in Engineering as indicated by the satisfactory treatment of some engineering problem (usually in the form of a paper). They have, therefore, their practical as well as their sentimental value.

Credit to Local Sections

The Local Sections also deserve much credit for their share in such a worthy activity. They may derive great satisfaction from their contact with their future professional brethren and from the assurance that they are fostering the ambition of deserving young men.

The Society can congratulate these men on the distinctions they have so well earned and itself on the opportunity for having them as members. It is hoped that they will bring to full realization the prospect implied by this good beginning in Society work.

Honorary Degrees for Engineers

Elsewhere it has been noted that President Davison may now be addressed as "Doctor", by virtue of being the recipient, at the close of the past academic year, of honorary degrees. Not alone to him of the Society, however, has that dignity been accorded.

Among those who have been similarly honored may be mentioned Past-President Charles F. Loweth, Vice-President Milo S. Ketchum, W. W. Crosby and Paul D. Sargent. Quite possibly there were yet others. These well deserved tributes show the trend of public thought in appreciation of the quiet but effective work of Engineers.

Washington Award to John W. Alvord

The Washington Award given annually to "an engineer whose work in some special instance or whose services in general have been noteworthy for their merit in promoting the public good" has been bestowed for the current year upon John W. Alvord, M. Am. Soc. C. E. Although administered by the Western Society of Engineers, the award

is given upon the choice of a commission in which are included representatives from the four Founder Societies.

It is worthy of comment that, including the present recipient, all five of the men who have received the Washington Award have been members of the Society. Mr. Alvord has had long and notable experience in sanitation and water-works in the Middle West. His many friends within and without the Society will rejoice with him in this latest tribute to his accomplishments.

Valuable Work of Society Representatives

A most useful but ordinarily unnoticed task performed by members of the Society is their attendance upon and deliberations with various meetings and committees in the work of which the Society is invited to take a part. As a result of this conscientious effort many valuable reports are submitted to the Society from time to time by its representatives.

Space does not permit at this time of more than a mere mention of some of these reports; suffice it to say that they represent a great deal of thought and much of value to those interested in the specific subject or project.

Among the reports recently submitted and now on file at Society Headquarters may be mentioned the following: Meeting of Committee on Underground Transportation in Coal Mines, Pittsburgh, Pa., H. S. Smith, M. Am. Soc. C. E., representative; National Conference on Street and Highway Safety, Washington, D. C., March 23-25, 1926, Edwin F. Wendt, M. Am. Soc. C. E., representative; Annual Conference on Lumber Standardization, Washington, D. C., April 27, 1926, Earl Stimson and E. A. Frink, Members, Am. Soc. C. E., representatives; Convention of the National Fire Protection Association, Atlantic City, N. J., May 10-13, 1926, W. C. Hawley, M. Am. Soc. C. E., representative; and Annual Meeting of the Academy of Political and Social Science, Philadelphia, Pa., May 14 and 15, 1926, Samuel T. Wagner, M. Am. Soc. C. E., representative.

For the benefit of any members who may wish to study these reports, they may be found on file at Society Headquarters. Copies of certain of them also can be made available to those members requesting them.

Franklin Medal to Samuel Rea

Further honors have recently come to Samuel Rea, Hon. M. Am. Soc. C. E., in the receipt of the Franklin Medal awarded annually by the Franklin Institute of Philadelphia to men notable in this and foreign countries. The award to Mr. Rea was "in recognition of his outstanding work in the conception and construction of railroads, their terminals, tunnels and bridges, and of his eminently successful application of the principles of science, economics and human relations to railway engineering and administration, in which he displayed vision, imagination and courage of high order."

Attaching the City Hall to Extract the Engineer's Pay

One of the latest and certainly the most original method of exacting a just claim for engineers' pay was threatened by a United States Marshal to enforce a United States District Court order. The plaintiff in the action of which this was the climax was none other than George F. Swain, Past-President, Am. Soc. C. E.

Several years ago Professor Swain did considerable work in reviewing the design for grade-crossing elimination at Perth Amboy, N. J. Subsequently, he made repeated efforts to collect his pay but was met with excuses and evasion, until finally he sought judgment from the U. S. District Court in Trenton, N. J., by which he was awarded the full sum of the claim. Still the municipality was evasive and only the drastic threat of the Marshal to attach the Perth Amboy City Hall enforced the decree of the Court.

A phase of the situation is not without its own elements of righteous retribution, in that because of the publicity given in the newspapers to this ridiculous situation, the Municipality of Perth Amboy is reported to have had difficulty subsequently in marketing some of its financial securities, and thus probably paid in the long run far more for its unreasonableness than the possible saving to it by avoiding payment.

In the presentation of his case, Professor Swain showed every scrap of correspondence relating to the controversy. There is a lesson here for all engineers, young and old, that in business matters the attention to correspondence records may be of vital importance in future

negotiations. Thus this little matter has its moral for every engineer on the side lines, as it were, as well as for the City of Perth Amboy.

Is Steel Reinforcement in Concrete Pavements Economically Justified?

To answer this question, C. A. Hogen-togler, Assoc. M. Am. Soc. C. E., has been working for many months under the auspices of the Highway Research Board, National Research Council. His work has covered the general inspection of about 5 500 miles of road and the detailed study of 2 000 miles, varying as to location, age, cross-section, subgrades, traffic, and reinforcement.

His conclusions cover too much ground to be detailed or even summarized here, but they are significant for the definite results obtained, whether it be as regards the size, the arrangement, or the disposition of the steel. Engineers who are interested in this important form of pavement construction may find much of value in the 135 pages of this report.

The distribution of this book is in the hands of the Highway Research Board, National Research Council, 21st and B Streets, N. W., Washington, D. C., to which inquiries or requests for copies should be addressed.

Engineers' Salaries in the City of Detroit

A recent chart issued by the Detroit Bureau of Governmental Research, a private organization, is interesting to engineers in that it shows the relation of engineering employees of the city to the various other officials.

It is very evident from this chart that the Detroit organization is highly centralized in the Mayor inasmuch as practically all the sub-organizations report directly to him. This is true as regards the Departments of Art, Correction, Public Welfare, Health, Fire, Police, Law, Civil Service, Finance, and a number of others besides the truly engineering phases of city work.

With some difficulty the City Engineer may be found on this chart, with a salary of \$8 500, reporting to the Commissioner of Public Works. Comparable with this is the Engineer for the Rapid Transit Commissioners (\$10 000); General Manager for the Board of Water Commissioners (\$10 000); the General Superintendent under the Public Lighting Commissions (\$10 000); and the Research Engineer reporting directly to the Mayor (\$6 000).

In contrast with these salaries may be noted those of the General Manager of the Municipal Street Railway (\$18 000); the Superintendent of Schools (\$15 000); and the Corporation Counsel (\$15 000). Among the other officials (not engineers) there are many with salaries of \$10 000 and an even greater number with lesser salaries down to \$5 000.

Thus it appears that in Detroit engineers have been accorded only a moderate recognition, although it is probably true that the proportion of relatively high priced engineers is greater than in some cities. Members may be interested to compare the figures here given with similar salaries in positions under their own observation.

Endowment Committee for Engineering Foundation and Engineering Societies Library

Plans for the co-operation of the Founder Societies in raising funds for Engineering Foundation and Engineering Societies Library include the appointment of a committee to work on this question of endowment. Three representatives of the Society on this Committee were authorized by the Board of Direction on January 18, 1926, and have been appointed by President Davison. With the representatives of other Societies the complete Committee now includes the following

Ex. Officio:

- W. L. Saunders, President, United Engineering Society, *Chairman*.
- L. B. Stillwell, Chairman, Engineering Foundation
- Sydney H. Ball, Chairman, Library Board.

Nominees of American Society of Civil Engineers:

- Charles F. Loweth, Chicago, Ill., Chief Engineer, Chicago, Milwaukee and St. Paul Railway.
- H. deB. Parsons, New York, N. Y., Consulting Engineer.
- Ralph J. Reed, Los Angeles, Calif., Chief Engineer, Union Oil Company.

Nominees of American Institute of Mining and Metallurgical Engineers:

- D. W. Brunton, Denver, Colo., Chairman, Board of Consulting Engineers, Moffat Tunnel.
- J. V. N. Dorr, New York, N. Y., President, The Dorr Company (Metallurgical, Chemical and Sanitary Process Equipment).

Thomas Robins, New York, N. Y., President, Robins Conveying Belt Company; Member, Naval Consulting Board.

Nominees of American Society of Mechanical Engineers.

J. W. Lieb, New York, N. Y., Vice-President and General Manager, The New York Edison Company.

Wynne Meredith, San Francisco, Calif., Member of Firm, Sanderson and Porter.

E. A. Simmons, New York, N. Y., President, Simmons-Boardman Publishing Company.

Nominees of American Institute of Electrical Engineers:

Calvert Townley, New York, N. Y., Assistant to President, Westinghouse Electric and Manufacturing Company.

H. A. Lardner, New York, N. Y., Vice-President, J. G. White Engineering Corporation.

E. Wilbur Rice, Jr., Schenectady, N. Y., Honorary Chairman, General Electric Company.

Members-at-Large:

Charles E. Rand, New York, N. Y., Past-President, American Institute of Mining and Metallurgical Engineers.

James H. Perkins, New York, N. Y., President, The Farmers' Loan and Trust Company, Financial Adviser and Custodian of Securities for United Engineering Society.

H. Hobart Porter, New York, N. Y., of Sanderson and Porter, and Presi-

dent, American Water-Works and Electric Company.

No hectic "drive" is planned, but an organization is being created to maintain a well-considered and persistent endeavor to get larger financial resources for Engineering Foundation and Engineering Societies Library as their opportunities for service develop.

Attendance at 1926 Spring Meeting in Kansas City

As a matter of record the attendance at the various functions of the Spring Meeting of the Society in Kansas City, Mo., April 14-16, 1926, is here given. These data were not available when the May *Proceedings* went to press. According to the count of the Local Committee the different sessions attracted much attention as shown by the following approximate attendance lists:

Total registration	418
Dinner, Wednesday evening	187
Ladies Entertainment, Reception, Dinner, and Bridge Party, each	50-60
Luncheon at Engineers Club, Thursday	381
Dinner Dance, Thursday evening	161

In comparison with other Spring Meetings this attendance shows to good advantage and reflects great credit on the efforts of the Local Committee and the Kansas City Section, all of whose members co-operated to make the meeting a successful one both from the technical and social points of view.

Local Sections*

Baltimore.—May 25, 1926. The following officers were elected: President, Ralph F. Proctor; Vice-President, Stenart Purcell; Secretary-Treasurer, C. E. Keefer.

Central Ohio.—April 5, 1926. Spring Meeting, Columbus. A business meeting was held at which the proposed amendments to the Constitution of the Society affecting the nomination and election of officers were discussed. Secretary Seabury addressed the meeting on the work of the Society. There were 16 members of the Section and 9 members of the Ohio State University Student Chapter in attendance.

Cincinnati.—April 15, 1926. This was Joint Meeting with the Engineers' Club of Cincinnati. Mr. Frederic H. Fay read a paper entitled "Mariemont, an Example of Modern City Planning", illustrated by lantern slides and moving pictures. City Manager C. O. Sherrill led an extended discussion on the subject of the address. Preceding the meeting the Section, members of the Board of Direction and the Past-Presidents of the Engineers' Club gave a dinner in honor of Mr. Fay. At a short business meeting the following officers were elected: Frank L. Raschig, President; Howard B. Luther, Vice-President; and Clifford N. Miller, Secretary-Treasurer.

Colorado.—April 19, 1926. The meeting was held at the Elks Club, Denver, where a dinner was served at which 30 members and 3 guests were present. After a discussion relative to redistricting of the membership, Captain Henry Hutchings, Jr., Corps of Engineers, U. S. A., told how the civil engineer fits into war-time activities and adapts himself to military needs. Reports of Committees were presented and discussed.

Connecticut.—April 23, 1926. The following officers were elected: President, Charles F. Chase; Vice-President, Frederick W. La Forge; Secretary-Treasurer, Clarence M. Blair; Directors, William T. Dorrance and Laurance J. Carmalt.

Detroit.—May 15, 1926. A luncheon was served preceding the meeting at which members of the Student Chapter of the University of Michigan were guests. A resolution was adopted inviting the co-operation of the University of Michigan with the Section's Committee on Bearing Value of Soils in the Detroit Area, and requesting that the University consider the advisability of providing ways and means of carrying on the work. Secretary Seabury addressed the meeting on the work of the Society, and its plans for future activities. Attendance 50.

Duluth.—May 17, 1926. Mr. Forbes gave a short talk on "State Roads". The following officers were elected: President, Henry C. Ash; First Vice-President, Lyonel Ayres; Second Vice-President, Simon W. Tarr; Secretary, Frank Hutchinson; Treasurer, John Carson. O. H. Dickerson and E. H. Dresser are Past-Presidents of the Section and with the newly elected officers

* For list of Local Section Officers, Rules, etc., see 1926 Year Book, p. 88.

form the Board of Directors for 1926-27 and also act as the Membership Committee. Attendance 22.

June 8, 1926. This was a dinner meeting at the Kitchi Gammi Club in honor of Mr. Walter G. Zimmermann, who was leaving Duluth to accept the position of Assistant Contracting Manager of the Chicago Office of the American Bridge Company. On motion, unanimously carried, Mr. Zimmermann was elected an Honorary Member of the Duluth Section. He was also presented with a handsomely bound book of letters expressive of the appreciation of his many friends and associates in Duluth. Attendance 68.

June 21, 1926. After the business meeting of the Section, the members present were addressed by T. L. Chapman, M. D., on the prevention and cure of goiter and the reaction of the several forms of that disease to the use of iodine. Dr. Chapman especially stressed the indiscriminate use of iodine in public water supplies. Attendance 20.

Los Angeles.—April 14, 1926. A dinner and meeting were held at the Elite Café. "The San Gabriel River Dam Problem" was discussed with great interest by S. B. Morris and Harry Hawgood. Mr. Morris gave an illustrated talk on "Economic Development of the San Gabriel River for Flood Control and Conservation", which was presented with a number of interesting slides. Mr. Hawgood spoke on the subject from the "Angle of Flood Control". General discussion of the papers followed. Attendance 148.

May 12, 1926. A dinner was held at which entertainment was furnished by a trio from the Engineering Department of the University of Southern California and the California Institute of Technology. The meeting then adjourned to reconvene at the Electrical Laboratories where interesting demonstrations in artificial lightning were given by Professor Royal W. Sorenson. The next place of meeting was Culvertson Hall where Mr. W. W. Michael gave an address on "Engineers and Engineering Education", which was illustrated by slides. Discussion followed. Attendance 129.

New York.—April 14, 1926. The New York Section with the other three Founder Societies participated in a Joint Meeting on "Qualifying Engineers for High Executive Positions". Addresses were made by Edwin M. Herr, President, Westinghouse Electric and Manufacturing Company, H. A. Guess, Vice-President, American Smelting and Refining Company, Dr. F. B. Jewett, Vice-President, American Telephone and Telegraph Company, and J. C. Parker, Vice-President and Chief Engineer, Brooklyn Edison Company. Attendance 850.

Northeastern.—May 15, 1926. The meeting which was held at the Boston City Club, was called to discuss the Report of the Committee of the Section on Code of Practice which had previously been distributed to the membership for study. It was voted unanimously that the Code be transmitted to the Board of Direction of the Society with the request that it be published in *Proceedings*, thrown open for discussion by the Society, and given such further consideration as the Board of Direction might approve.

Northwestern.—March 19, 1926. The meeting was held at the St. Paul Athletic Club, St. Paul, Minn. The speaker of the evening, Charles M. Babcock, Commissioner of Highways, State of Minnesota, spoke very interestingly on "Highway Developments in Latin-American Countries" supplemented by items of general interest relative to his South American tour while serving as a member of the United States Delegation to the Pan-American Road Congress at Buenos Aires, Argentina. Four members of the Student Chapter, University of Minnesota, were guests of the Section.

Portland (Ore.)—March 18, 1926. The report of the Committee on Proposed Amendments to the Constitution was delivered and action taken thereon by the Section. Mr. E. B. MacNaughton delivered a very entertaining and instructive lecture illustrated by lantern slides on the growth of the city. Attendance 30.

April 16, 1926. Rules were amended relative to the Prize Essay Contest and a Local Membership Committee of three was appointed. Mr. J. H. Polhemus addressed the meeting on the design and operation of the dredges owned by the Port of Portland, illustrated by moving pictures. Attendance 19.

Providence.—May 25, 1926. Annual Meeting. The following officers were elected: Chairman, Robert L. Bowen; Vice-Chairman, Howard W. Congdon; Secretary-Treasurer, Charles H. Dutton.

Sacramento.—March 23, 1926. At a joint meeting of the Section with the Sacramento Chapter, American Association of Engineers, and the Sacramento Section, American Chemical Society, at which a number of technical students from the Junior College were present, Colonel George A. Hunt, gave an illustrated talk on "Chemical Warfare". Attendance 70.

March 30, 1926. Professor Daniel W. Mead, a Member of the Board of Consulting Engineers for Sacramento Municipal Utility District, spoke on "Flood Control". Attendance 23.

April 6, 1926. Paul M. Downing, Vice-President of the Pacific Gas and Electric Company, in charge of electrical construction and operation, gave an illustrated talk on "The Pit River Development of the Pacific Gas and Electric Company". Attendance 54.

St. Louis.—April 26, 1926. After a business meeting President George S. Davison gave an enlightening talk on the activities of the Society. Attendance 62.

May 24, 1926. Baxter L. Brown, Chairman of the Executive Committee in charge of the Industrial Exposition to be held at St. Louis in the Fall of 1926 under the auspices of the Chamber of Commerce, gave a talk explaining the plans and object of the Exposition. William C. Bernard, Engineering Adviser to the City Department in charge of condemnation proceedings, spoke on the methods followed in assessing benefits and damages on property involved in condemnation projects. Attendance 24.

June 28, 1926. The meeting was held at the City Club following a luncheon at which 38 members and guests were present. The report of the Committee to Award Prizes to Junior Members at Washington University for the best

engineering paper, was received and approved. The award was made to Mr. E. M. Kniestedt for his paper entitled "The Bearing Value of Soils". The meeting was addressed by Maj. C. E. Smith on the proposed ordinance relative to the exchange of the Eads and Municipal Bridges, now before the City and Terminal Association.

San Francisco.—February 16, 1926. A dinner was held at which 101 members and guests were present. After the business meeting at which communications were read and committee reports presented, Professor Charles D. Marx addressed the meeting on "Industrial Conditions in Germany". Attendance 120.

February 20, 1926. Members and guests of the Section enjoyed an excursion trip to Exchequer Dam, Merced County. Three private Pullmans carried the party, numbering 85, from Oakland Mole to Merced, where they arrived early Saturday morning, February 20. Breakfast was served in a special banquet room at the Sentinel Hotel. Several members and guests and a number of members of the Los Angeles Section joined the party at Merced, thus making the total number 138. A special Yosemite Valley Railroad train took the party to Pleasant Valley, where the large steel bridge in course of erection was inspected. The new railroad location was then viewed from two flat cars which carried the party to the upper end of the development, where a luncheon provided by the U. S. Steel Products Company was served. Later the excursion continued to Exchequer, to inspect the dam, and from there went to Merced, arriving at Oakland Mole at 9:30 P. M. on Saturday.

April 20, 1926. Ninety members and guests were present at the dinner. After the presentation of various communications addressed to the Section, Director Henry D. Dewell discussed briefly the Kansas City Meeting of the Society. W. A. Slater, M. Am. Soc. C. E., presented the address of the evening, "Tests Made during the War for the Concrete Ship Section of the Emergency Fleet Corporation". Attendance 100.

Texas.—April 19, 1926. Spring Meeting, Dallas. President George S. Davison, Vice-President Richard L. Humphrey, Director J. M. Howe and Secretary George T. Seabury were guests of honor at a breakfast at the University Club. Short addresses were given by the guests and by President E. R. Brown of the Dallas Chamber of Commerce, Nathan Adams, President of the American Exchange Bank, and others. The members and guests numbering about 25 made an inspection trip to Garza Reservoir, the new Dallas water supply, following which a barbecue lunch was served by the contractors. Later, a dinner was held at the Jefferson Hotel at which the attendance was about 60. The meeting at this time was devoted to a review of the activities of the Society and recommendations in regard to the work of Local Sections.

April 20, 1926. Houston. The address of welcome was given by Acting Mayor Halverton. Short talks were made by Messrs. J. C. McVea, F. E. Giesecke, O. H. Koch, J. H. Brillhart, A. J. McKenzie, and others. Director Howe gave a report of the Spring Meeting at Kansas City, Mo., and also on the activities of the Board of Direction. The Senior Civil Engineering Class of Rice Institute was present. Secretary Seabury gave a short address directed

particularly to the students and subsequently spoke on the work of the Society. The meeting adjourned at noon to be guests of the Houston Engineers Club for luncheon (about 175 being present), at which President Davison gave an address on friendship and duty of the engineer. Following the luncheon the party was taken for a boat trip down the ship channel to the San Jacinto Battle Grounds where a dinner was served.

Utah.—June 7, 1926. The meeting was preceded by a dinner. The Secretary-Treasurer was instructed to pass on to the Western Washington Section for the Summer Meeting in Seattle the \$25 that had been donated by the Cincinnati Section for the Salt Lake City Meeting. Announcement of the first award of the Annual Student Prize to Mr. Charles F. Smith for his paper entitled "200-Foot Arch Highway Bridge", was made by Chairman Richardson of the Committee of Award, and George M. Bacon, State Engineer, was delegated to make the award at the Commencement exercises of the University of Utah on June 8, 1926. Attendance 12.

Virginia.—May 21, 1926. The following officers were elected: President, F. L. Nicholson; Vice-Presidents, Henry G. Shirley, F. P. Turner, and R. W. B. Hart. This was a Joint Meeting of the Virginia Sections of the Founder Societies and the following papers were presented: "Industrial Power Plants", by J. L. Jordan, Superintendent, Viscose Corporation, Roanoke; "Economy in Bridge Design", by Paul A. Blackwell, Chief Engineer, Virginia Bridge and Iron Company, Roanoke; "Trees to Rayon", by Roy Smith, Chemist, Viscose Corporation, and "Informal Talk on Wood Preservation", by J. H. Gibboney, Chief Chemist, Norfolk and Western Railway Company, Roanoke. C. L. Watkins, City Engineer of Roanoke, spoke on the Memorial Bridge of that city and R. W. B. Hart, Acting City Manager of Lynchburg, described the Beck Memorial Bridge, at Lynchburg.

Student Chapters*

Massachusetts Institute of Technology.—February 17, 1926. The civil engineering societies of Boston, including the Chapter, attended a joint meeting at the invitation of the Boston Society of Civil Engineers. Mr. H. A. Hageman, of Stone and Webster, Inc., spoke on "The Bartlett Ferry Hydro-electric Development".

March 4, 1926. Mr. Thaddeus Merriman, Chief Engineer of the Board of Water Supply, City of New York, addressed the Chapter on "The Catskill Water System of the City of New York". Attendance 100.

April 7, 1926. Mr. L. J. Towne, of Stone and Webster, Inc., spoke on "The Design and Construction of a Modern Office Building". The talk was interesting particularly as the problems of building construction are seldom presented. Attendance 50.

* For list of Student Chapters, Officers, etc., see 1926 Year Book, p. 94.

Engineering Societies Library

The services of the Engineering Societies Library are available to all members who wish searches, copies, translations, etc., or advice on technical literature. A collection of modern books is also available for loan to members in North America, at moderate rentals. Correspondence should be addressed to the Director, Engineering Societies Library, 29 West 39th Street, New York, N. Y., who will gladly give information concerning the charges for the various kinds of work. A more comprehensive statement in regard to this matter will be found on pages 110 and 111 of the Year Book for 1926.

Book Notices*

(April 1 to June 30, 1926)

Architectural Construction, Vol. 2: An Analysis of the Structural Design of American Buildings; Book 1, Wood Construction. By Walter G. Voss and Edward A. Varney. N. Y., John Wiley & Sons, 1926. 224 pp., illus., diagrams, tab., 12 x 6 in., cloth. \$6.50.

This book, the first of several analyzing the structural design of buildings, is devoted to wood construction and deals primarily with mill buildings and the so-called second-class and third-class construction, in which more or less inflammable materials are used structurally. The design of beams, floor and roof construction, columns, and miscellaneous framing is discussed. Each principle of design is analyzed, its relation to the entire building and to those architectural and structural details that control it is studied, and its application shown by illustrative problems.

Aus dem Reich der Technik. By Max Maria von Weber. Berlin, V. D. I. Verlag, 1926. 188 pp., port., 8 x 6 in., cloth. 7 r.m.

Weber was born in 1822 and died in 1881. He was educated as an engineer and spent his life in railroad service. He is best known, however, for his stories, which unite technical knowledge and poetic ability in an unusual degree. Those here reproduced are based on various incidents of railroad operation. Through them all runs a desire to arouse pride in his vocation in the railroad employer and to show the public the importance to national prosperity of the engineer and the mechanic.

Beginnings of the New York Central Railroad. By Frank Walker Stevens. N. Y., G. P. Putnam's Sons, 1926. 408 pp., illus., ports., map, 9 x 6 in., cloth. \$4.00. (Gift of the New York Central R. R. Co.)

A record of the early problems, trials, successes, failures, and growth of the early railroads which were consolidated, in 1853, to form the New York Central Railroad is contained in this book. The organization and history of the ten corporations which were consolidated is given, together with much of interest about early matters of transportation, legislative regulation, and equipment. The book appears in the Centennial Year of the Mohawk and Hudson, the first of these roads.

Bridge at Windsor, Vt., and Its Economic Implications. By Richard T. Dana. N. Y., Codex Book Co., 1926. 75 pp., illus., 6 x 5 in., fabrikoid. \$1.50.

Mr. Dana has written an interesting brief description of one of the oldest public utility enterprises financed by private capital and still in operation. The history of the enterprise (from 1796), the early returns to the owners, and the construction and present condition of the bridge (built in 1866) are set forth.

Clay Products Cyclopedia and Equipment Catalog. Third Edition. 1926. Chic., Industrial Publications, Inc., 1926. 336 pp., illus., 12 x 9 in., cloth. \$3.00.

* The statements made in these notices are taken from the books themselves, and this Society is not responsible for them. Unless otherwise specified, the books in this list have been donated by publishers.

As a combination reference book and catalog of equipment for those engaged in making clay products, the text treats of many phases of manufacture, such as plant construction, power, fuels, conveyors, raw materials, drying, kilns, preparation of clays, molding and glazing. Condensed catalogs of a number of equipment makers are given, as well as lists of trade names, statistics, and trade associations.

Divergente und Konvergente Turbulente Strömungen mit Kleinen Öffnungswinkeln. By Fritz Dönch. (Forschungsarbeiten auf dem Gebiete des Ingenieurwesens, Heft 282.) Berlin, V. D. I. Verlag, 1926. 58 pp., diagrams, tab., 10 x 7 in., paper. 7.50 r.m.

This brochure presents the results of a series of investigations of fundamental problems in the flow of fluids carried on at the Institute of Applied Mechanics in Göttingen, under Professor Prandtl's direction. Using air and a rectangular pipe with movable walls, the investigator examined the details of turbulent flow, especially convergent and divergent flow, from a unified point of view. Formulas are derived and the experimental results are evaluated.

Elementary Treatise on Statically Indeterminate Stresses. By John Ira Parcel and George Alfred Maney. N. Y., John Wiley & Sons, 1926. 368 pp., diagrams, tab., 9 x 6 in., cloth. \$5.00.

The authors present fundamental methods of attack on the problem of indeterminate stresses and illustrate such methods by applying them to some common types of indeterminate structures. The subject-matter includes an exposition of the theory of elastic deflections and a broad treatment of the general problem of indeterminate stresses, continuous girders, rigid frames, elastic arches, and secondary stresses. A general discussion of statically indeterminate construction, a historical review, and a good annotated bibliography, are also given.

Flow of Water in Pipes. By Hiram F. Mills. Providence, R. I., Privately printed, 1923. 236 pp., port., diagrams, tab., 12 x 10 in., cloth. \$7.50. (Gift of Mr. John R. Freeman.)

During a period of nearly fifty years the author, then Chief Engineer of the Essex Company of Lawrence, Mass., was occupied with a study of the flow of water in pipes. In addition to a critical examination of all the available data, much careful experimental work was done under his direction. The present volume, largely written in Mr. Mills' later years, has been prepared for publication by John R. Freeman, Past-President, Am. Soc. C. E. In it is developed a theory of flow and formulas for the flow of water in straight pipes. Complete records of the experimental data, etc., are given. Mr. Freeman has contributed a short account of the history of the work, and Karl R. Kennison, M. Am. Soc. C. E., an introductory outline. This book forms one of the series of memoirs published by the American Academy of Arts and Sciences, Newbury Street, Boston, Mass.

Geological Maps. By Robert M. Chalmers. Lond. & N. Y., Oxford University Press, 1926. 175 pp., illus., maps, 9 x 6 in., cloth. \$4.25.

A textbook for geologists and engineers, this book is intended to instruct them in the interpretation of geological maps and the collection of data from them. A bibliography is included.

Geology of India for Students. By D. N. Wadia. Lond., Macmillan & Co., 1926. 400 pp., illus., maps, 9 x 6 in., cloth. 18 s.

The absence of any modern textbook on the geology of India is remedied by the present volume. After a brief description of the physical features of the country, its stratigraphy is discussed at length. A chapter is devoted to physiography, and another to economic geology.

Güterumschlag; Die Güterumschlag-Verkehrswoche des V. D. I. in Düsseldorf und Köln, 1925. Sonderausgabe der Zeitschrift des V. D. I. Berlin, V. D. I. Verlag, 1926. 256 pp., illus., diagrams, 11 x 8 in., paper. 30 r.m.

In September, 1925, a conference on the problems of freight traffic was held in Düsseldorf and Cologne under the auspices of the Verein Deutsche Ingenieure. The papers presented appeared in the V. D. I. *Zeitschrift* and are now collected in the present volume. In addition to railroad freight handling, there are papers on boat traffic, harbor machinery, street and light railroads, motor-truck and airship freight handling. Special attention is given to loading and unloading machinery and to the efficient utilization of equipment.

Highway Curves and Earthwork. By Thomas F. Hickerson. N. Y., McGraw-Hill Book Co., 1926. 382 pp., tab., 7 x 4 in., fabrikoid. \$3.50.

This handbook on highway location lays emphasis on the subject of curves and earthwork, including banking and widening of pavements and contains a variety of original tables intended to facilitate the laying out of easement spirals.

Hydraulische Probleme: Vorträge auf der Hydrauliktagung in Göttingen, June, 1925. Berlin, V. D. I. Verlag, 1926. 219 pp., illus., diagrams, 8 x 6 in., cloth. 22,50 mk.

The addresses include a report on recent investigations of turbulence, by L. Prandtl; experiments on cavitation and corrosion in turbines, by H. Föttinger; cavitation in hydraulic turbines, by D. Thoma; the improvement of turbine suction pipes, by Osterlen; the approximation of flow losses and the problem of bends, the reactions at the blade tips of Kaplan turbines, the use of conformal representation in the calculation of currents in turbines, by W. Spannhaake; the ultimate number of vanes and the impossible working field of turbines, by C. Pfeleiderer; and anomalous flow in measuring nozzles, by D. Thoma. The discussions of the papers are also given.

Movable Bridges, Vol. 1; Superstructure. By Otis Ellis Hovey, M. Am. Soc. C. E. N. Y., John Wiley & Sons, 1926. 352 pp., illus., diagrams, tab., 9 x 6 in., cloth. \$6.00.

This volume, the first of a treatise on the design of movable bridges and their machinery, includes a brief history of early designs, discussions on various types of movable bridges, statistical information intended to assist in determining the best type for particular conditions, as well as the simplest and most practical methods of stress analysis. Chapters on elastic deflections, rail joints, counterweights, and houses for operators are also included, together with appendices giving an analysis of stresses in lenticular disks and a new method for designing tread plates for the supporting and segmental girders of rolling-lift bridges.

Pegasus; or, Problems of Transportation. By J. F. C. Fuller. N. Y., E. P. Dutton & Co., 1926. 87 pp., 6 x 4 in., cloth. \$1.00.

The first paper in the book, "The Battle of the Iron Horse," traces quickly the evolution of transportation to Stephenson's invention and shows how persistent was public opposition to all improvement. The second paper, "The Conquest of the Elysian Fields," advocates a new system of transportation for undeveloped lands, based on the roadless vehicle.

Petrology of the Igneous Rocks. By F. H. Hatch. Eighth Edition, Rev. with the Assistance of A. K. Wells. (Textbook of Petrology, Vol. 1.) N. Y., Macmillan Co., 1926. 566 pp., illus., diagrams, maps, 7 x 5 in., cloth. \$4.75.

After an interval of twelve years, this popular textbook has been thoroughly revised. Among the new features are chapters on the consolidation of igneous magmas and on cycles of igneous activity in the British Isles, and a discussion of the work of the Geophysical Laboratory at Washington.

Railroad Electrification and the Electric Locomotive. By Arthur J. Manson. Second Edition. N. Y., Simmons-Boardman Publishing Co., 1925. 332 pp., illus., diagrams, tab., 9 x 6 in., cloth. \$4.00.

To provide information of value to those concerned with the operation and maintenance of electric locomotives, the general subject of railroad electrification is minimized. The design and construction of electric locomotives are described and illustrated, and the solutions of a number of practical problems incident to electrification are given.

Railway Engineering and Maintenance Cyclopedia. Second Edition, 1926 [of Maintenance of Way Cyclopedia]. N. Y., Simmons-Boardman Pub. Co., 1926. 1072 pp., illus., 12 x 9 in., cloth. \$8.00.

This cyclopedia is a convenient, authoritative assemblage of information on current practice in the engineering and maintenance of railroad track, bridges, buildings, water service and signals. A dictionary of terms gives convenient definitions and serves as an index. Condensed catalogs of manufacturers are included. The sections were edited by a number of specialists actively engaged in railroading.

Die Schalltechnik. By Richard Berger. Braunschweig, Friedr. Vieweg & Sohn, 1926. 115 pp., diagrams, 9 x 6 in., paper. 8 r.m.

This book is a summary of the present state of knowledge of acoustics, and is intended to enable those not deeply informed to orient themselves quickly in this field, and also to point the directions in which research is needed.

Sewage Purification and Disposal. By G. Bertram Kershaw. Second Edition. (Cambridge Public Health Series.) Cambridge, University Press, 1925. 364 pp., illus., diagrams, tab., 9 x 6 in., cloth. 18 s. (Gift of Macmillan Co., N. Y.)

This volume forms one of a series on public health published by the Cambridge University Press, and is intended to supply information, both scientific and practical, to physicians and others concerned with public health and hygiene. The author discusses methods of con-

servancy, sewerage systems, the removal of suspended matter, sludge disposal, land treatment, contact beds, filters, sterilization, the treatment of trades wastes, and activated sludge processes, with bibliographies.

Statik für Baugewerkschulen und Baugewerksmeister, Vol. 2: Festigkeitslehre. By Karl Zillieh. Ninth Edition. 157 pp., diagrams, tab., 7 x 5 in., boards. 3.40 mk.

This is a concise manual on the strength of structural materials, intended as a textbook and a ready reference book.

Story of the Western Railroads. By Robert Edgar Riegel. N. Y., Macmillan Co., 1926. 345 pp., 8 x 5 in., cloth. \$2.50.

The treatment in this general history of Western railroads, is economic and social and covers the period from 1852 to the early years of the Twentieth Century. A considerable bibliography is included.

Theory of Functions of a Real Variable and the Theory of Fourier's Series; Vol. 2. By E. W. Hobson. Second Edition. Cambridge, University Press, 1926. 780 pp., 10 x 7 in., cloth. 50 s. (Gift of Macmillan Co., N. Y.)

This important treatise, the first volume of which appeared in 1921, is now completed. The second volume deals with the theory of series and particularly of Fourier's series. It is the only English book containing a systematic statement of many of the ideas introduced by modern mathematicians.

Topographical Drawing Notes. By G. P. Schubert. Second Edition. Houghton, Mich., Michigan College of Mines, 1926. 82 pp., 11 drawings and diagrams, 6 x 9 in., cloth. \$1.65.

This textbook treats of various methods of calculating and plotting traverses and of drawing suitable topographic maps.

Treatise on Sedimentation. By William H. Twenhofel and Others. Balt., Williams & Wilkins Co., 1926. 661 pp., illus., tab., 9 x 6 in., cloth. \$7.50.

Courses in petrography have heretofore stressed the study of igneous rocks, while less attention has been paid to those of sedimentary origin. As a step to remedying this situation, the National Research Council, through a special committee, initiated in 1920 the preparation of this treatise on the subject. The result is an inventory of present knowledge concerning the sources and production of sediments, the methods by which they are transported and deposited, the influences that modify sedimentation, products of sedimentation, the structures, textures, and colors of sediments, and the environments of sedimentation.

Untersuchung über die Geschwindigkeitsverteilung in Turbulenten Strömungen. By J. Nikuradse. (Forschungsarbeiten auf dem Gebiete des Ingenieurwesens, Heft 281.) Berlin, V. D. I. Verlag, 1926. 44 pp., illus., diagrams, tab., 11 x 8 in., paper. 6 r.m.

This work gives the results of experiments on the distribution of velocities in closed channels and also on the surface of open channels. Part 1 describes experiments on turbulent flow in pipes with circular, triangular and rectangular sections, giving the apparatus used, the method, and the results. In Part 2, the distribution of velocities in an open rectangular channel and on its surface is investigated and a comparison of distribution in open and in closed channels is included.

Versuche mit dem Giessverfahren für Eisenbeton. Reported by F. Schmeer. (Deutscher Ausschuss für Eisenbeton, Heft 55.) Berlin, Wilhelm Ernst & Sohn, 1926. 31 pp., illus., diagrams, 10 x 7 in., paper. 3.90 r. m.

The tests of reinforced concrete structural elements, by pouring or spouting the concrete, contained in this book were made under the direction of the German Reinforced Concrete Committee to determine whether that method of placing concrete was as safe as older ones. The conclusion is that the method has no unfavorable influence on the strength of the concrete.

Von der Bewegung des Wassers und den Dabei Auftretenden Kräften, nach Arbeiten von Alexander Koch. Edited by Max Carstanjen. Berlin, Julius Springer, 1926. 228 pp., illus., port., diagrams, 11 x 8 in., cloth. 28.50 r.m.

This book makes accessible the results obtained during the many years that Dr. Koch was engaged at the Hydraulic Laboratory of the Darmstadt Technical High School in the investigation of the laws governing the motion of flowing water and of the force exerted by water in motion. An introductory chapter briefly summarizes principles. Potential energy and the laws of motion are then discussed. Succeeding chapters discuss the types of flow, discharge through wall openings and travelling waves. The Appendix, comprising one-fourth

of the book, includes a study of the resistance of the experimental channel, of the transition from one type of flow to another, of the effect of contractions of the channel, and of discharge through openings or by overflow.

Die Wasserturbinen. By P. Holl. Revised by Emil Treiber. Berlin und Leipzig, Walter de Gruyter & Co., 1926. 2 v., 6 x 4 in., cloth. 1,50 r.m. each.

By extreme condensation, the author has succeeded in giving a practical summary of the principles of the hydraulic turbine in these two small volumes. The first volume contains a general introduction on water power and turbines, followed by a discussion of the Pelton wheel and its regulating apparatus and of its applications. The second volume treats of the Francis turbine, covering its theory and structural principles, its construction and use, with some remarks on power plants.

Additions to the Reading Room

Theory of Functions of a Real Variable and the Theory of Functions of a Complex Variable. By E. W. Hobson. Second Edition. Cambridge University Press, 1926. 2 v., 6 x 4 in., cloth. 1,50 r.m. each.

Profits. By William Trufant Foster and Waddell Catchings. Bost. and N. Y., Houghton Mifflin Company, 1925. 465 pp., diagrams, tab., 8 x 5 in., cloth. \$4.00. (Gift of Pollak Foundation for Economic Research.)

The authors state that progress toward greater total production is retarded because consumer buying does not keep pace with production; that such buying lags behind because industry does not disburse to consumers enough money to buy the goods produced and because, under the necessity of saving, they cannot spend even as much money as they receive. This problem is considered in detail by the authors who offer no definite answer, stating that an understanding of the question is the first need. The Contents are: Part I, Introductory; Part II, The Necessity of Profits and Losses; Part III, The Amount and Distribution of Profits; Part IV, The Functions of Prices and Profits; Part V, Money and Profits, in Relation to Consumption.

Treatise on Sedimentation. By William H. T. W. Hobson. Cambridge University Press, 1926. 2 v., 6 x 4 in., cloth. 1,50 r.m. each.

Course in petrography pays particular attention to the study of sedimentary rocks. Attention has been paid to those of sedimentary origin. As a step in remedying this situation, the National Research Council, through a special committee, initiated in 1920 the preparation of this treatise on the subject. The result is an inventory of current knowledge concerning the sources and production of sediment, the methods by which they are transported and deposited, and the influence of sedimentation on the development of sedimentary rocks, their texture, and color of sediment, and the development of sedimentation.

Untersuchung über die Geschwindigkeitsverteilung in Turbulenzen. By J. Nikuradse. (Forschungsbereich der Göttinger Strömungskunde.) Berlin, V.D.I. Verlag, 1926. 44 pp., illus., 4 x 6 in., paper. 0.50 r.m.

This work gives the results of experiments on the distribution of velocities in closed channels and also on the velocity of open channels. Part I describes experiments on closed channels and flow in pipes with circular, triangular and rectangular sections giving the velocity distribution, the method and the results. In Part II the distribution of velocities in open channels is investigated and a comparison of distribution in open and in closed channels is included.

Versuche mit dem Wasserstrahl zur Messung der Viskosität. By J. Nikuradse. (Forschungsbereich der Göttinger Strömungskunde.) Berlin, V.D.I. Verlag, 1926. 44 pp., illus., 4 x 6 in., paper. 0.50 r.m.

The tests of turbulent water-strahl viscosity by means of water in closed channels were made under the direction of the German Research Committee to determine whether this method of viscosity measurement was reliable or not. The conclusion is that the method has no appreciable influence on the strength of the concrete.

Von der Bewegung des Wassers nach der Theorie der turbulenten Strömung. By J. Nikuradse. (Forschungsbereich der Göttinger Strömungskunde.) Berlin, V.D.I. Verlag, 1926. 44 pp., illus., 4 x 6 in., paper. 0.50 r.m.

This book makes considerable results obtained during the many years that the Göttinger Laboratory of the Hydraulic Institute has been engaged in the investigation of the laws governing the motion of flowing water and of the forces exerted by water in motion. An introductory chapter briefly summarizes hydrology, hydraulic engineering and the laws of motion are then discussed. Successive chapters discuss the theory of flow, discharge, flow in pipes and channels, and the theory of flow in open channels.

Current Civil Engineering Literature

Key to Abbreviated References to Publications Indexed*

Abbreviated References.	Publication.	Place.
Am. C. Inst.....	American Concrete Institute, Proceedings (Y.)	Detroit
A. I. E. E.....	American Institute of Electrical Engineers Journal (M.)	New York
A. R. E. A.....	American Railway Engineering Association, Proceedings (Y.)	Chicago
A. S. T. M.....	American Society for Testing Materials, Proceedings (Y.)	Philadelphia
Am. Soc. C. E.....	American Society of Civil Engineers, Proceedings (M.)	New York
Am. Soc. Mun. Impvts.	American Society for Municipal Improvements, Proceedings (Y.)	New York
Am. W. W. Assoc.....	American Water Works Association, Journal (Bi-M.)	Baltimore
Am. Wood Pres. Assoc.....	American Wood Preservers Association, Proceedings (Y.)	Chicago
Ann. P. et C.....	Annales des Ponts et Chaussées (Bi-M.)	Paris
Ann. T. P. Belg.....	Annales des Travaux Publics de Belgique (Bi-M.)	Brussels
Assoc. Ing. Gand.....	Annales de l'Association des Ingénieurs sortis des Ecoles Spéciales de Gand (Q.)	Ghent
Bost. Soc. C. E.....	Boston Society of Civil Engineers, Journal (M.)	Boston
Can. Engr.....	Canadian Engineer (W.)	Toronto
Cornell C. E.....	Cornell Civil Engineer (M.)	Ithaca
Dock & Harbour.....	Dock and Harbour Authority (M.)	London
Eng.....	Engineering (W.)	London
Eng. & Contr.....	Engineering and Contracting (W.)	Chicago
Eng. Inst. Can.....	Engineering Institute of Canada, Journal (M.)	Montreal
Eng. N. R.....	Engineering News-Record (W.)	New York
Engrs. Soc. W. Pa.....	Engineers' Society of Western Pennsylvania, Journal (M.)	Pittsburgh
Engr.....	Engineer (W.)	London
Engrs. & Eng.....	Engineers and Engineering, Engineers' Club of Philadelphia (M.)	Philadelphia
Gen. Civ.....	Le Génie Civil (W.)	Paris
Gesund. Ing.....	Gesundheits Ingenieur (W.)	Munich
Inst. C. E.....	Institution of Civil Engineers Minutes of Proceedings (Q.)	London
Inst. Mun. & Co. Engrs.	Institution of Municipal and County Engineers, Journal (W.)	London
Int. Ry. Cong. Assoc.....	International Railway Congress Association, Bulletin (M.)	Brussels
Land. Arch.....	Landscape Architecture (M.)	Harrisburg
Mech. Eng.....	Mechanical Engineering (M.) Journal of the American Society of Mechanical Engineers	New York
Mil. Engr.....	Military Engineer (M.)	Washington
Min. & Metal.....	Mining and Metallurgy (M.) American Institute of Mining Engineers	New York
Mun. & Co. Eng.....	Municipal and County Engineering (M.)	Indianapolis
N. E. W. W. Assoc.....	New England Water Works Association, Journal (M.)	Boston
N. Y. R. R. Club.....	New York Railroad Club, Proceedings (M.)	Brooklyn
Oest. Ing. Arch. Ver.....	Oesterreichischer Ingenieur und Architekten Verein, Zeitschrift (F.)	Vienna
Power.....	Power (W.)	New York
Rev. Gen.....	Revue Générale des Chemins de Fer (M.)	Paris
Ry. Age.....	Railway Age (W.)	New York
Ry. Eng. & Main.....	Railway Engineering and Maintenance (M.)	Chicago
Ry. Rev.....	Railway Review (W.)	Chicago
Schw. Bauz.....	Schweizerische Bauzeitung (W.)	Zurich
Scl. Am.....	Scientific American (M.)	New York
Soc. Ing. Civ. Fr.....	Société des Ingénieurs Civils de France, Mémoires et Comptes Rendus (Q.)	Paris
Ver. deu. Ing.....	Verein deutscher Ingenieure, Zeitschrift (W.)	Berlin
West. Ry. Club.....	Western Railway Club, Proceedings (M.)	Chicago
West. Soc. Engrs.....	Western Society of Engineers, Journal (M.)	Chicago
Zeit. Bau.....	Zeitschrift für Bauwesen (Q.)	Berlin
Z. d. Bauver.....	Zentralblatt der Bauverwaltung (W.)	Berlin

* Y = Yearly; Q = Quarterly; M = Monthly; F = Fortnightly; W = Weekly.

A. Applied Sciences

a. Processes of Calculation

1. Mechanical Processes

Lösung statischer Aufgaben mittels Modellgerätes.* (Solution of Static Problems by the Use of Model Apparatus.) Otto Gottschalk. Ver. deu. Ing. Feb. 20, '26.

2. Graphical and Nomographical Processes

Moments in Restrained and Continuous Beams by the Method of Conjugate Points.* Discussion: John J. Gut, Richard G. Doerfling, R. McC. Beanfield and Walter Ruppel. Am. Soc. C. E. Apr., '26.

Properties of the Catenary and Parabola.* Robins Fleming. May 25, '26.

The Making of Special Slide Rules.* Mech. Eng. June, '26.

Méthode graphique appliquée à la chaînette.* (Graphical Method Applied to the Catenary.) J. H. Granbery. Soc. Ing. Civ. Fr. Mar.-Apr., '26.

3. Stresses and Strains

Some Notes of Dissent.* Robins Fleming. Eng. & Contr. Mar. 24, '26.

Calculation of Continuous Beams of Variable Section.* Phillip G. Laurson. Eng. N. R. Apr. 15, '26.

Notes on Shear in Compression Members.* Discussion: Henry S. Prichard, Anders Bull and Ralph E. Goodwin. Am. Soc. C. E. May, '26.

Utilizable Capacity of Steel Members of Structures.* Discussion: F. E. Schmitt and Henry S. Prichard. Am. Soc. C. E. May, '26.

Observed Stress Distribution in Web of I-Beam.* O. H. Basquin. Eng. N. R. June 3, '26.

Beitrag zur zeichnerischen Spannkraftbestimmung räumlicher Fachwerkträger.* (Contribution to the Diagrammatic Determination of Tensile Force in Spatial Lattice Girders.) L. Geusen. Zelt. Bau. Heft II Ing. 1 bis 3. '26.

B. Applied Mechanics

a. Mechanics of Solids (Strength of Materials)

1. Processes of Measurement

Bending and Torsional Strains and Stresses in a Loaded Crank Shaft.* H. Carrington. Engr. May 21, '26.

Lösung statischer Aufgaben mittels Modellgerätes.* (Solution of Static Problems by the Use of Model Apparatus.) Otto Gottschalk. Ver. deu. Ing. Feb. 20, '26.

2. Elastic Solids

Some Recent Stress Analyses by Means of the Photoelastic Method.* Paul Heymans. Eng. Inst. Can. Apr., '26.

6. Heterogeneous Solids (Reinforced Materials)

Stresses in Helically Reinforced Concrete Columns. Discussion: Missac Thompson. Am. Soc. C. E. Apr., '26.

Stresses in Helically Reinforced Concrete Columns. Discussion: C. L. Eddy and E. H. Harder. Am. Soc. C. E. May, '26.

7. Pulverulent Masses

Pressure Against Retaining Walls.* Can. Engr. Apr. 20, '26.

Erddruckversuche in Amerika und ihre Bedeutung für die Erddrucktheorie.* (Earth pressure tests in America and their importance for the earth pressure theory.) Alfred Streck. Z. D. Bauber. May 12, '26.

b. Hydraulics

1. Processes of Measurement

La mesure des débits des conduits au moyen de l'ajutage de Venturi.* (Measurement of the Flow in Pipes by Means of the Venturi Tube.) E. Finkel. Gen. Civ. May 22, '26.

2. Physical Hydraulics

Side Channel Spillways: Hydraulic Theory, Economic Factors and Experimental Determination of Losses. Discussion: Julian Hinds. Am. Soc. C. E. Apr., '26.

Wasserbewegung in steilen Rinnen (Schusstennen) mit besonderer Berücksichtigung der Selbstbelüftung. (The Motion of Water in Steep Channels with Special Consideration of Aeration.) R. Ehrenberger. Oest. Ing. Arch. Ver. Serial beginning Apr. 16, '26.

3. Industrial Hydraulics

The Bartlett's Ferry Hydroelectric Development.* H. A. Hageman and T. B. Parker. Bost. Soc. C. E. Mar., '26.

Design and Test of Susquehanna Station.* E. M. Gilbert. Mech. Eng. Apr., '26.

Hydraulic Maintenance at Holtwood Plant.* T. C. Stabley. Mech. Eng. Apr., '26.

Hydraulic Developments of the Midl Railway in the Ossau Valley.* Engr. Apr. 2, '26.

Turbines and the Cavitation Problem.* Elvo Engleson. Can. Engr. Apr. 13, '26.

The New Hydraulic Power Station at Cardiff Docks.* Eng. Serial beginning Apr. 30, '26.

Co-ordination of Irrigation and Power. Discussion: C. S. Jarvis and William Kelly. J. Am. Soc. C. E. May, '26.

Developments of the Hydro-Electric Power Commission of Ontario.* Frederick A. Gaby. Am. Soc. C. E. May, '26.

Tests at Wilson Dam Power-House.* F. H. Kohlss. Mil. Engr. May-June, '26.

Progress Review of Water-Power Development.* V. R. Davies. Can. Engr. Serial beginning May 4, '26.

Manifold and Anchorage Combined in Pitt Three Penstock.* Eng. N. R. May 6, '26.

Progress Review of Water-Power Development.* V. R. Davies. Can. Engr. May 11, '26.

The Catawba Hydro-Electric Plant of the Southern Power Company.* Power May 11, '26.

Old Earth Dam on the Pequannock in Northern New Jersey.* J. Albert Holmes. Eng. N. R. May 13, '26.

Replace Cast-Iron Turbine Runners Quickly After Failure.* Eng. N. R. May 13, '26.

- Regulation of High-Speed Hydraulic Turbines.* John S. Carpenter. Power May 18, '26.
 Some Notes on Swiss Hydro-Electric Supply.* Alfred R. Sieveking. Engr. May 21, '26.
 A New Type of Spillway.* Adolph J. Ackreman. (From Wisconsin Engineer.) Eng. & Contr. June 9, '26.
 Turbine Testing at Wilson Dam.* L. B. Feagin. (From Central Division News.) Eng. & Contr. June 9, '26.
 Earth Dam Falls by Shrinkage Under Frost Crust.* Eng. N. R. June 10, '26.
 Sur le calcul et le fonctionnement des stations marémotrices à marche continue.* (On the calculations and operation of continuous tide power stations.) R. Coquebert. Soc. Ing. Civ. Fr. Mar.-Apr., '26.
 Wasserkraftanlage Alto Belice in Silizien.* (The Alto Belice Water-Power Plant in Sicily.) Z. d. Bauver. Feb. 3, '26.
 Zur Kennzeichnung des neueren nordamerikanischen Wasserkraftausbaues.* (Characteristics of Modern North American Water Power Development.) Rudolf Tillmann. Oest. Ing. Arch. Ver. Feb. 5, '26.
 Die Turbinen-Versuchsanlage der A.-G. der Maschinenfabrik von Theodor Bell & Cie., Kriens.* (The Turbine Testing Plant of the A.-G. der Maschinenfabrik von Theodore Bell & Cie., in Kriens.) O. Walter. Schw. Bauz. Serial beginning Feb. 27, '26.
 Die Kehrbachwerke bei Wiener-Neustadt.* (The Works on the Kehrbach at Vienna-Neustadt.) Karl Jaburek. Oest. Ing. Arch. Ver. Mar. 5, '26.
 Die hydrographischen Grundlagen für die Planung von Wasserkraftwerken in Südwestdeutschland.* (The hydrographic bases for planning water power plants in Southwest Germany.) R. Drenkhahn. Ver. deu. Ing. Apr. 10, '26.
 Moderne nordamerikanischen Wasserkraftanlagen Henry Fords.* (Henry Ford's North American water power plants.) Schw. Bauz. May 1, '26.
4. Dams
 The Sherman Island Dam, New York.* Eng. Serial beginning Apr. 23, '26.
 Giants Spread Car-Dumped Fill for Alouette Dam.* C. E. Blee. Eng. N. R. Apr. 29, '26.
 Le barrage-réservoir du Diemeltal près de Cassel (Allemagne).* (Diemeltal reservoir dam near Cassel (Germany).) A. C. Gen. Civ. May 1, '26.
 Le barrage et l'usine hydroélectrique de Camarasa sur la Noguera Pallaresa (Espagne).* (Dam and hydro-electric plant of Camarasa at Noguera Pallaresa (Spain).) P. Galfas. Gen. Civ. May 15, '26.
 Le barrage et l'usine hydro-electrique de Pit river (California).* (The Pit River dam and hydroelectric plant (California).) Gen. Civ. May 29, '26.
 Die Diemeltalsperre.* (The Diemelt Dam.) Paul Gerecke. Zeit. Bau. (Ing.) Pt. 10-12, '25.
 Versuchstalsperre in Gewölbeform in Amerika.* (Experimental arch Dam in America.) Prof. Mattern. Z. d. Bauver. Mar. 24, '26.
 Das Wilson-Stauwehr der Wasserkraft-Anlagen an den Muscle Shoals.* (The Wilson dam for the water power plant at Muscle Shoals.) Hans Meyer. Schw. Bauz. Apr. 3, '26.
 Zur Frage der Hochwasserentlastung an Staudämmen.* (On the question of flood discharge at dams.) E. Mattern. Z. d. Bauver. Serial beginning Apr. 21, '26.

c. Pneumatics

- Pneumatic Tool Mechanisms.* Frank Hills. (Paper read before Leeds Eng. Soc.) Eng. Serial beginning Apr. 9, '26.

C. Materials of Construction and General Processes

a. Lime, Cement, Mortar, Concrete, Brick, Bitumin, Timber, etc.

- Fireproofing Properties of Cement.* B. C. Collier. (Paper read before Am. Inst. Steel Constr.) Can. Engr. Mar. 30, '26.
 Corrosion of Concrete.* John R. Baylis. Am. Soc. C. E. Apr., '26.
 Cement: Its Real Nature and Properties. Edward Godfrey. Can. Engr. Apr. 20, '26.
 Lime-Silica Index as Measure of Cement Quality.* Thaddeus Merriman. Eng. N. R. Apr. 22, '26.
 Prehydration of Cement in New Method of Concrete Mixing.* Eng. N. R. May 27, '26.
 Laboratory Control of Aggregates. Roger L. Morrison. (Paper read before Univ. of Michigan. June 2, '26.
 Strengthening and Indurating Concrete with Sulphur.* W. H. Kobbé. Eng. N. R. June 10, '26.
 Strength of Masonry at Early Ages.* J. S. Elwell. (Paper read before Bldg. Officials Conference.) Can. Engr. June 15, '26.
 La fabrication continue du béton avec dosage à sec par les procédés Pelerin.* (Continuous preparation of concrete with dry proportioning according to the Pelerin process.) A. M. Gen. Civ. Apr. 10, '26.
 Die Auslaugung des zementmörtels. (The Washing Out of Cement Mortar.) Hasak. Z. d. Bauver. Mar. 17, '26.
 Beton bestimmter Widerstandsfähigkeit.* (Concrete of determined strength.) Otto Graf. Ver. deu. Ing. Mar. 20, '26.
 Beitrag zur Gussbetonfrage. (Contribution on the question of cast concrete.) Jerosch. Z. d. Bauver. Apr. 7, '26.
 Versuche mit Hochofenzement.* (Tests with blast furnace cement.) H. Burchartz. Z. d. Bauver. May 19, '26.

b. Metals

- Streckgrenze Kalt- und Warmspröugigkeit.* (Elastic limit, cold and hot shortness.) P. Ludwik. Ver. deu. Ing. Mar. 20, '26.

c. Preservation and Use of Materials, Painting, Waterproofing

- Corrosion of Iron and Steel. A. J. Vandermyn. (From The Western Architect.) Eng. & Contr. Apr. 28, '26.

A Way to Conserve Our Valuable Timber Supply.* R. K. Helphenstine. Sci. Am., May, '26.

f. Rock Excavation, Mining, Rock Removal

Abstracts of Institute Papers. Min. & Metal May, '26.

Abstracts of Institute Papers. Min. & Metal June, '26.

g. Execution of Works, Specifications

2. Of Concrete

Failure of Concrete Shaft Linings at Pennsylvania Bituminous Coal-Mines.* N. G. Alford. Engrs. Soc. W. Pa. Mar., '26.

Precast Concrete Roof Slabs.* Can. Engr. Apr. 6, '26.

Concrete Cribbing for Railway Retaining Walls.* Eng. N. R. Apr. 22, '26.

Specifying Concrete by Water-Cement Ratio Alone.* Eng. N. R. Apr. 29, '26.

Elements Affecting Concrete Construction.* C. S. Pope. Eng. & Contr. May 5, '26.

Economical Concreting Plant for Tank Construction.* Eng. N. R. May 20, '26.

Tallest Concrete Chimney on American Continent.* Eng. N. R. June 3, '26.

Der Einfluss der Art der Betoneinbringung auf die Betonfestigkeit. (Effect of the method of placing concrete on the strength of concrete.) Z. d. Bauver. Apr. 28, '26.

3. Of Wood

Colorado Stadium Is Built of Timber in Ravine.* W. C. Huntington, and W. E. Brockway. Eng. N. R. Apr. 15, '26.

Design of Details in Timber Structures.* Ray H. Lindgren. Bost. Soc. C. E. May, '26.

4. Of Metal

Steel Construction Standardization. Lee H. Miller. West. Soc. Engrs. Feb., '26.

Recent Developments in Structural Steel Practice.* R. D. Wood. Cornell C. E. Apr., '26.

Steel Trusses Carry 22 Stories in Chicago Hotel.* Eng. N. R. Apr. 22, '26.

Load Tests on an Old Reinforced Concrete Warehouse. Walter H. Wheeler. Eng. & Contr. Apr. 28, '26.

Light I-Beams Developed for Joist Floor Construction.* Eng. N. R. May 6, '26.

Alteration Involving a 26-Story Self-Sustaining Wall.* David C. Coyle. Eng. N. R. May 13, '26.

5. Of Reinforced Concrete

Guniting Steel Cement Kiln Stacks.* John E. Lind. Can. Engr. Apr. 20, '26.

Encasement Increases Strength. B. C. Collier. Can. Engr. Apr. 20, '26.

Reinforced Concrete Crib Construction.* Can. Engr. Apr. 27, '26.

x. Miscellaneous

Owners' Responsibility for Structural Safety. Norman M. Stineman. West. Soc. Engrs. Mar., '26.

Economic Study of Plant Layout for Building Construction.* Zara Witkin. Eng. N. R. June 17, '26.

h. Foundations, Bridge Piers and Abutments

Foundations for Roads and Structures. W. J. Moore. (Paper read before Conference on Road Construction.) Can. Engr. Mar. 23, '26.

Difficult Underpinning Work in Building Construction.* William P. Parker. Eng. N. R. Apr. 1, '26.

Problems of a Deep Caisson-Cofferdam Foundation, New York Federal Reserve Bank.* Carlton S. Proctor. Eng. N. R. Apr. 15, '26.

Brick Wall Underpinned to Remove Proscenium Arch.* A. R. Taylor. Eng. N. R. Apr. 29, '26.

i. Piles and Pile-Driving

Comparative Tests on Concrete Piles in Sea Water.* Eng. N. R. May 6, '26.

Underwater Piledriving and Cofferdam Sealing.* John C. Pritchard. Eng. N. R. June 10, '26.

k. Tunnels and Tunneling-Shield

Soft Rock Operations in Moffat Tunnel.* A. E. Anderson. (From Du Pont Magazine.) Eng. & Contr. Apr. 21, '26.

Tunnel Taps Mystic Lake Below Water Surface.* Eng. N. R. Apr. 22, '26.

Pipe Tunnel Under Gowanus Canal, Brooklyn, New York. Discussion: Robert Ridgway, J. C. Meem, John R. Slaterry, Henry B. Seaman and T. Kennard Thomson. Am. Soc. C. E. May, '26.

Tunneling Dry Sand Made "Live" by Passing Trains.* Eng. N. R. May 20, '26.

Handling a Large Water Flow in the Moffat Tunnel.* C. A. Betts. Eng. N. R. June 17, '26.

l. Construction Machinery and Tools, Drainage

An Oil-Engine-Driven Dragline Excavator.* Engr. Apr. 9, '26.

Die Zugförderung im Baubetriebe.* (Horizontal transportation in building construction.) Otto Juttmann. Oest. Ing. Arch. Ver. Jan. 22, '26.

x. Miscellaneous

Stabilizing the Building Industry. W. J. Lynch. (Paper read before Am. Constr. Council.) Eng. & Contr. Mar. 24, '26.

D. Highways

a. Location

Side Street Economics. Alfred S. Malcolmson. Eng. & Contr. Apr. 7, '26.

Highway Location. Ralph R. Benedict. (Paper read before Am. Road Bldrs. Assoc.) Eng. & Contr. Apr. 7, '26.

The Location of the Modern Highway. Henry L. Brightman. (Paper read before Univ. of Michigan.) Eng. & Contr. June 2, '26.

c. Construction

Field Control of Highway Construction. C. E. Foster. (Paper read before Conference on Highway Eng., Univ. of Michigan.) Mun. & Co. Eng. Mar., '26.

Foundations for Roads and Structures. W. J. Moore. (Paper read before Conference on Road Construction.) Can. Engr. Mar. 23, '26.

Watercourses on the Roadside. G. E. Stephenson. (From paper read before Conference on Road Constr.) Can. Engr. Mar. 30, '26.

The Hexagonal Slab Design of Concrete Pavement.* Discussion: H. O. Root and Wesley Vandercook. Am. Soc. C. E. Apr., '26.

The Planning and Layout of Highways and the Economics of Highway Transportation. (Report on Public Affairs Comm., West Soc. Engrs.) West. Soc. Engrs., Apr., '26.

Recommended Asphalt Paving Mixture Practice. Prevost Hubbard. (Paper read before Conference of North Atlantic Highway Officials.) Mun. & Co. Eng. Apr., '26.

Management on Concrete Paving Jobs. J. L. Harrison. (Paper read before Conference on Highway Engr., Univ. of Michigan.) Mun. & Co. Eng. Apr., '26.

Asphalt Macadam in New York and New England. U. L. Ostrander. (Paper read before New Hampshire Good Roads Assoc.) Mun. & Co. Eng. Apr., '26.

A Concrete Pavement Detailed as a Floor Is Detailed.* Walter H. Wheeler. Eng. N. R. Apr. 1, '26.

How to Secure Greater Output in Concrete Road Construction.* J. L. Harrison. (Paper read before Am. Concrete Inst.) Eng. & Contr. Apr. 7, '26.

Subgrading for Concrete Pavements.* C. J. Moritz. (Paper read before Am. Road Bldrs. Assoc.) Eng. & Contr. Apr. 7, '26.

Cost of Hexagonal Slab Concrete Pavements.* L. A. Perry. Eng. & Contr. Apr. 7, '26.

Recent Developments in Bituminous Paving Practice.* Harry M. Rex. (Paper read before Am. Road Bldrs. Assoc.) Eng. & Contr. Apr. 7, '26.

Building Paved Road by Force Account in Michigan.* Eng. N. R. Apr. 8, '26.

The Life of Wood Paving as Affected by Expansion.* J. Garvie. Inst. Mun. & Co. Eng. Apr. 13, '26.

Earth Road Construction and Maintenance.* Harold M. Thompson. Can. Engr. Apr. 13, '26.

Building Avenida Progresso in Peru from Lima to Callao.* Eng. N. R. Apr. 15, '26.

Center Joints Reduce Cracking of Seattle Pavements.* W. H. Tiedeman. Eng. N. R. Apr. 22, '26.

Construction of Hydraulic Fill Road Embankment.* Eng. N. R. Apr. 29, '26.

The Hexagonal Slab Design of Concrete Pavement.* Discussion: Lewis A. Perry. Am. Soc. C. E. May, '26.

Increasing the Efficiency of Passenger Transportation in City Streets.* John A. Miller. Am. Soc. C. E. May, '26.

Highway Research in North Carolina. C. M. Upham. Mun. & Co. Eng. May, '26.

Asphalt Wearing Courses on Gravel Roads. G. C. Dillman. (Paper read before Conference on Highway Eng., Univ. Mich.) Mun. & Co. Eng. May, '26.

Black Base Foundation for Pavements. V. L. Ostrander. (Paper read before Mass. Highway Assoc.) Can. Engr. May 4, '26.

Prosecuting Highway Construction. W. R. Smith. Eng. & Contr. May 5, '26.

Asphalt Paving Mixtures in Highway Construction. Prevost Hubbard. (Paper read before Conference of North Atlantic States' Highway Officials.) Eng. & Contr. May 5, '26.

Concrete Paving Practice Developments. H. E. Surman. (Paper read before Am. Road Bldrs. Assoc.) Can. Engr. May 11, '26.

Application of Vertical Curves to Highway Design.* M. W. Furr. Eng. N. R. May 20, '26.

Crushed Stone and Asphalt Pavements. Prevost Hubbard. (Paper read before Nat'l Crushed Stone Assoc.) Can. Engr. May 25, '26.

Mexican Federal Road System Makes Progress.* P. K. Schuyler. Eng. N. R. May 27, '26.

Les routes aux Etats-Unis tracé, construction et entretien.* (Roads in the United States—location, construction and maintenance.) P. Cautourier. Gen. Civ. Apr. 17, '26.

Technische Entwicklung des amerikanischen Strassenbauwesens.* (Technical development of American road construction methods.) Haller. Zelt. Bau. Heft II, Ing. 1 bis 3, '26.

d. Maintenance

The Salvage Value of Brick Pavements.* A. S. Mirick. Cornell C. E. Mar., '26.

Trunk Highway Maintenance in Michigan. B. C. Tinney. (Paper read before Conference on Highway Eng., Univ. of Michigan.) Mun. & Co. Eng. Mar., '26.

Michigan Road Maintenance Methods. B. C. Tinney. (Paper read before Road School, Purdue Univ.) Can. Engr. Mar. 30, '26.

Patching and Resurfacing City Pavement. D. B. Davis. (Paper read before Road School, Purdue Univ.) Eng. & Contr. Apr. 7, '26.

Maintenance Costs of Asphalt Pavements. R. H. Simpson. (Paper read before Fourth Asphalt Paving Conference.) Can. Engr. Apr. 13, '26.

State Highway Maintenance Work in Indiana.* A. H. Hinkle. (From paper read before Purdue Road School.) Mun. & Co. Eng. May, '26.

Surface Treatment of Macadam and Gravel Roads. G. Hunter Sykes. Mun. & Co. Eng. May 1, '26.

Maintenance of Highway Right of Way. O. S. Hess. (Paper read before Univ. of Michigan, Highway Eng. Conference.) Eng. & Contr. May 5, '26.

Smoothing Surface of Old Pavements. H. O. Offutt. (Paper read before Annual Road School, Purdue Univ.) Eng. & Contr. May 5, '26.

Highway Types and Upkeep Costs in Porto Rico.* F. Lavis. Eng. N. R. June 3, '26.

Note sur l'entretien des chaussées empierrées. (Note on the maintenance of macadam roads.) M. Pigelet. Ann. P. et C. Jan.-Feb., '26.

g. Machinery and Tools

- Combining Truck and Industrial Railway Hauling on Highway Work. T. J. Weidner. *Mun. & Co. Eng. Mar.*, '26.
 What Should be the Hauling Cost on Concrete Paving.* J. L. Harrison. *Eng. N. R. May* 13, '26.

h. Vehicles, Automobiles, Traffic

- Notes on Highway Research. S. S. Sternberg. (From radio address under auspices of Nat'l Research Council & Science Service.) *Mun. & Co. Eng. Apr.*, '26.
 Greater Safety at Railroad Highway Crossings. Charles E. Hill. (Paper read before Purdue Univ.) *Mun. & Co. Eng. Apr.*, '26.
 The Planning and Layout of Highways and the Economics of Highway Transportation. (Report of Public Affairs Comm. West. Soc. Engrs.) *West Soc. Engrs. Apr.*, '26.
 Using Power Consumption to Measure Transportation Cost. *Mun. & Co. Eng. Apr.*, '26.
 Second Highway Safety Conference Meets in Washington. *Eng. N. R. Apr. 1*, '26.
 Traffic Control Progress During 1925 in Buffalo, N. Y. *Eng. N. R. Apr. 8*, '26.
 Increasing the Efficiency of Passenger Transportation in City Streets.* John A. Miller. *Am. Soc. C. E. May*, '26.
 Metropolitan Traffic Control.* Harold M. Lewis. (Paper read before Nat'l Highway Traffic Assoc.) *Eng. & Contr. May 5*, '26.
 The Correlation of Transportation Facilities. T. R. Dahl. (From paper read before Am. Road Bldrs. Assoc.) *Eng. & Contr. May 5*, '26.
 Plan for Simultaneous Control of All Traffic in District.* *Eng. N. R. May 27*, '26.
 And We Call Ourselves Efficient! H. W. Slawson. *Sci. Am. Jun.*, '26.
 Economic Transportation. W. W. Crosby. (*Bulletin*, Permanent Int. Assoc. of Road Cong.) *Eng. & Contr. June 2*, '26.
 Verkehrsregelung auf Berliner Strassen und Plätzen.* (Traffic regulations on Berlin's streets and circles.) G. Klose. *Schw. Bau. Apr. 24*, '26.

x. Miscellaneous

- Laboratory Control of Concrete Aggregates. Roger L. Morrison. (Paper read before Conference on Highway Eng., Univ. of Michigan.) *Mun. & Co. Eng. Mar.*, '26.
 Recent Developments in Highway Bridge Engineering. J. R. Burkey. (Paper read before Mississippi Valley Conference of State Highway Officials.) *Mun. & Co. Eng. Apr.*, '26.
 Subgrade Investigations.* V. R. Burton. (Paper read before Univ. of Michigan.) *Eng. & Contr. June 2*, '26.

E. Bridges, Viaducts, and Arches

a. Timber Bridges and Viaducts

- Missouri Builds Timber Trestles with Concrete Floor.* *Eng. N. R. Apr. 1*, '26.

b. Iron and Steel Bridges and Viaducts

- Verstärkung der gusseisernen Bogenbrücke über die Rhone.* (Strengthening of the Cast-Iron Arch Bridge over the Rhone.) La Voulte. *Schw. Bauz. Feb. 6*, '26.
 Die Freihafenelbbrücke in Hamburg.* (Bridge over the Free Port of the Elb at Hamburg.) *May 12*, '26.
 Note sur les déformations élastiques du viaduc de la Recoumène.* (Note on the elastic deformations of the Recoumène viaduct.) M. Canat and M. Gay. *Ann. P. et C. Jan.-Feb.*, '26.
 The Doubling of the Upper Sone Bridge, India.* H. C. Mugeridge. *Eng. Serial beginning Mar. 28*, '26.
 Lift Span Complicated Bridge Raising Project.* G. H. Wilsey. *Ry. Eng. & Main. Apr.*, '26.
 Reinforcing Columbia River Bridge of Great Northern Ry.* H. S. Loeffler. *Eng. N. R. Apr. 8*, '26.
 The Second Narrows Bridge, Vancouver.* *Engr. Apr. 9*, '26.
 New Bridge at Kalgan Eliminates Floods. *Ry. Rev. May 1*, '26.
 Bridge Reinforcing Under Difficulties.* H. S. Loeffler. *Ry. Rev. May 1*, '26.
 Oregon Steel Arch Erected by Cableway.* C. B. McCullough. *Eng. N. R. May 13*, '26.
 Develop Ingenious Reinforcement for Old Bridge.* H. S. Loeffler. *Ry. Age Apr. 24*, '26.
 Railroad Bridge Forces Erect Heavy Girder Span.* *Ry. Eng. & Main. May*, '26.
 Corrosion in an Old Viaduct at Joints and in Concrete Incased Steel. *Alr. Ellis. Eng. N. R. May 13*, '26.
 Florida East Coast Completes St. Johns River Bridge.* P. P. Pierce. *Ry. Age May 22*, '26.
 Latest of Our Great Bridges.* J. Bernard Walker. *Sci. Am. July*, '26.

c. Stone Bridges and Viaducts

- Design of Masonry and Concrete Arches.* A. C. Hughes. (From *The Surveyor*.) *Can. Engr. Mar. 23*, '26.
 Repairing Old Masonry Arch Culvert.* L. T. Sogard. (From *The Wisconsin Engineer*.) *Eng. & Contr. Apr. 16*, '26.
 Old Iron Bridge Transformed to Masonry Arch Viaduct.* Frank H. Constant. *Eng. N. R. May 20*, '26.
 Théorie des voutes circulaires épaisses et des cylindres annulaires.* (Theory of Thick Circular Arches and Annular Cylinders.) R. Chambaud. *Gen. Civ. Mar. 13*, '26.

d. Concrete and Reinforced Concrete Bridges and Viaducts

- Design of Masonry and Concrete Arches.* A. C. Hughes. (From *The Surveyor*.) *Can. Engr. Mar. 23*, '26.
 Provincial Highway Bridge, Freeport.* A. B. Crealock. *Can. Engr. Mar. 30*, '26.

- Rigid Frames in Concrete Bridge Construction.* Arthur G. Hayden. Eng. N. R. Apr. 29, '26.
 Analysis of Continuous Concrete Arch System.* C. S. Whitney. Am. Soc. C. E. May, '26.
 Douglas Memorial Bridge in California Completed.* Harlan D. Miller. Eng. N. R. June 17, '26.
 Pont en arc, en béton armé de fonte et fretté à Gmünden (Autriche). (Concrete arch bridge reinforced with cast iron and hoops, at Gmünden (Austria).) A. C. Gen. Civ. Apr. 24, '26.

- g. Swing, Bascule, Lift, Floating, Oscillating Bridges, Traveling Cranes
 The Electric Control of Movable Bridges.* C. H. S. Tupholme. Dock & Harbour June, '26.
 Neuartiger Antrieb von Hubbrücken.* (New type of drive for lift bridges.) Ver. deu. Ing. Apr. 17, '26.

h. Computations, Tests, etc.

- Effet du passage des charges roulantes sur les poutres des ponts de chemins de fer. (Effect of the passage of rolling loads on the stresses of railway bridges.) F. Chaudy. Gen. Civ. Apr. 17, '26.
 Calcul des efforts dans un arc parabolique doublement encastré à la suite de mouvements dans les culées. (Calculation of forces in a parabolic arch with two fixed points, due to movements in the abutments.) Léon Légens. Gen. Civ. Mar. 27, '26.
 Calcul de l'arc symétrique à fibre moyenne. (Calculation of the symmetrical arch with mean fibre.) A. Rogoff. Gen. Civ. May 8, '26.
 Beitrag zur zeichnerischen Spannkraftbestimmung räumlicher Fehwerktrager.* (Contribution to the diagrammatic determination of tensile force in spatial lattices girders.) L. Geusen. Zeit. Heft. 11 Ing. 1 bis 3, '26.
 Zur statik der Kölner Brückensäule. (On the statics of the Cologne bridge columns.) Rich Sonntag. Z. d. Bauver. Mar. 3, '26.
 Bestimmung des Horizontalschubes von zweigelenbogen, oder-rahmen, beliebiger Form, durch Schätzung.* (Determination by estimation of the horizontal thrust of two-link arches, or of frames of any shape.) W. B. Gutacker. Z. d. Bauver. Apr. 14, '26.

F. Inland Waters, Waterways

a. Natural Waterways (General Articles)

- Interstate Water Problems and Their Solution.* M. C. Hinderlider and R. I. Meeker. Am. Soc. C. E. Apr., '26.
 The Welland Ship Canal.* Eng. Apr. 9, '26.
 The St. Lawrence Waterway to the Sea.* Discussion: Francis C. Shenehon. Am. Soc. C. E. May, '26.
 Interstate Water Problems and Their Solution. Discussion: Frank C. Emerson. Am. Soc. C. E. May, '26.
 The Work of the Quebec Streams Commission.* O. Lefebvre. Am. Soc. C. E. May, '26.

b. Canals (General Articles)

- The Welland Ship Canal.* J. Bernard Walker. Sci. Am. July, '26.
 La construction du canal de la Meuse au Waal (Holland). (The Construction of the Canal from the Meuse to the Waal (Holland).) Alfred Bijls. Gen. Civ. Feb. 27, '26.
 Les travaux de canalisation de la Meuse en Hollande.* (The Works of the Canalization of the Meuse in Holland.) Alfred Bijls. Gen. Civ. Mar. 20, '26.
 Vom Bau des Lippeseitenkanals Wesel-Datteln.* (Construction of the Wesel-Datteln Canal along the Lippe.) Bock. Z. d. Bauver. Mar. 3, '26.

c. Regulation of Waterways—Volume of Discharge, Freshets, Floods, Soundings

- Stream Regulation with Reference to Irrigation and Power.* J. C. Stevens. Am. Soc. C. E. Apr., '26.
 Progress Report of Special Committee on Flood-Protection Data. Discussion: Morris Knowles and Robert E. Horton. Am. Soc. C. E. Apr., '26.
 River Control at the New St. Louis Water-Works.* Edward E. Wall. Eng. N. R. Apr. 8, '26.
 Army Engineers Recommend Restricting Chicago Diversion. Eng. N. R. Apr. 8, '26.
 Stream Regulation with Reference to Irrigation and Power. Discussion: Edward H. Sargent, W. G. Hoyt, F. F. Henshaw, Barry Dibble, Ralf R. Wooley and Arthur P. Davis. Am. Soc. C. E. May, '26.
 The Chicago Drainage Canal.* J. L. Busfield. Eng. Inst. Can. May, '26.
 Western City Ends Flood Menace.* J. E. Murphy. Sci. Am. May, '26.
 Weir-Stick for Use on Narrow Canals or Streams.* T. A. Hayden. Eng. N. R. May 27, '26.

d. Diverting Dams, Locks, Lifts, Elevators, Inclined Planes

- Heavy Lift Gate at Lockport Lock of Illinois Waterway.* Walter M. Smith. Eng. N. R. May 6, '26.
 Baffle Piers at Toe of Dam Dissipate Energy of Flow.* I. C. Steele. Eng. N. R. June 3, '26.

e. Supply, Sources of Water, Drains and Reservoirs

- The Work of the Quebec Streams Commission.* O. Lefebvre. Am. Soc. C. E. May, '26.
 Operation of River Regulating Reservoirs.* Melvin D. Caster. Eng. N. R. May 20, '26.
 L'emploi des siphons à amorçage automatique pour la régularisation du niveau des réservoirs.* (The Use of Automatic Siphons for the Regulation of the Level of Reservoirs.) A. Levergnier. Gen. Civ. Mar. 27, '26.

Die Anlagen und Einrichtungen zur Verhütung von Stauschäden im Gebiet der Waldecker Talsperre.* (Plans and Arrangements for Preventing Damage by Bad Water in the Region of the Waldeck Dam.) Thürnan. Zeit. Bau. (Ing.) Pt. 10-12, '25.
 Aufnützung des obern Murgsees zu Akkumulierungszwecken.* (The Utilization of the Upper Murgsee for Storage Purposes.) Hans Wyss. Schw. Bauz. Feb. 20, '26.
 Die Grundwasserbildung in ihrer Abhängigkeit von der Grundluft.* (Ground Water Formation in Its Relation to Ground Air.) Chr. Megger. Gesund. Ing. Mar. 6, '26.

g. Consolidation of Banks, Leakage, etc.

Repair Concrete Wall Damaged by Intense Fire.* Alfred S. Fry. Eng. N. R. May 13, '26.

k. Utilization of Inland Waterways, Freight, Capacity

Relation of the Ohio River and Its Tributaries to Transportation in the United States.* A Symposium. Discussion: C. W. Kutz. Am. Soc. C. E. Apr., '26.
 Die wirtschaftliche Bedeutung des Ausbaues der Rhein-Schiffahrtsstrasse am Bingerloch.* (Economic Importance of the Development of the Navigation Channel of the Rhine at Bingerloch.) Buchholz. Zeit. Bau. Heft II Ing. 1 bis 3, '26.

G. Maritime Works

a. Behavior of Movements of the Ocean

Determining Current Strengths in Tidal Basin Entrances. H. A. Marmer. Eng. N. R. Apr. 22, '26.
 A Tidal Problem in New York Harbor.* Edward Burr. Mil. Engr. May-June, '26.

c. Vessels and Maritime Navigation, Lighthouses, Buoys, Various Signals

What Is Sea Speed.* Reginald J. Eyres. (From paper read before North-East Coast Inst. Engrs. and Shipbuilders.) Engr. Apr. 2, '26.
 Submarines, Their Use and Limitations.* Edmund W. Burrough. Mil. Engr. May-June, '26.
 Les nouveaux navires de combat.* (The New War Vessels.) F. Chaupaut. Gen. Civ. Feb. 13, '26.
 Le Paquebot "Explorateur-Grandidier" des Messageries Maritimes.* (The Steamship Explorateur-Grandidier of the Messageries Maritimes.) Gen. Civ. May 22, '26.

d. Roads and Outer Harbors, Dikes and Jetties, Breakwaters

Reinforced-Concrete Permeable Dikes.* John C. Gotwals. Mil. Engr. May-June, '26.

f. Maritime Rivers and Canals, Bank Protection

Les passes de l'Escaut maritime.* (The Channels of the Escaut.) Tobie Claes. Assoc. Ing. Gand. Pt. 1, '26.

g. Dredges and Dredging, Force Pumps, Refloating and Removing Wrecks, Ice-Breakers

Oil Engine in a New Field.* Sci. Am. Jun., '26.

h. Boats, Barges

The Forces Involved in the Slewing Motion of Power Cranes.* Edward G. Fliegehen. Eng. Apr. 16, '26.
 Modern Port Granary Equipment.* George Frederick Zimmer. Dock & Harbour May, '26.
 Thriving Canadian Port: New Westminster, B. C.* Dock & Harbour May, '26.
 Floating Grain Elevators at the Port of Liverpool.* Dock & Harbour May, '26.
 Transfer Elevator at Owen Sound, Ont.* Can. Engr. May 18, '26.
 Seaham Harbour South Dock.* Dock & Harbour June, '26.
 Concrete Quay Built to Carry 50-Ft. Pile of Rock.* Eng. N. R. June 17, '26.
 Ausbau des Erz- und Eisenkalks im Seehafen Emden.* (Enlargement of the Ore and Iron Docks in Emden Harbor.) Z. d. Bauver. May 5, '26.

i. Harbors (General Articles)

The Port of Valencia and Its Prospective Development.* Frederico G. Membrillera. Dock & Harbour Apr., '26.
 The Port of Hongkong and Its Commercial Development.* John Duncan. Dock & Harbour Serial beginning Apr., '26.
 Water Front Zoning.* M. A. Graham. (Paper read before Pacific Coast Assoc. Port Auth.) Dock & Harbour Apr., '26.
 The Port of Goole and Its Projected Improvement Works.* John Eaglesome. Dock & Harbour May, '26.
 Recent Improvement Works at the Port of Belfast.* T. S. Gilbert. Dock & Harbour June, '26.
 The Port of Oslo: Past, Present and Future.* Sverre B. Ström. Dock & Harbour June, '26.
 Les installations maritimes de Diego-Suarez.* (The Sea-Works of Diego-Suarez.) Ann. P. et C. Jan.-Feb., '26.
 Der weitere Ausbau des Fischerhafens Wesermünde. (The Further Development of the Fishing Harbor at the Mouth of the Weser.) Verlohr. Zeit. d. Bau. Feb. 24, '26.
 Ausbau des Stettiner Hafens.* (The Enlargement of the Port of Stettin.) Lohmeyer. Z. d. Bauver. Mar. 17, '26.

j. Dockyard Machinery and Shipyards, Dry Docks

The New Esquimalt Dry Dock.* J. P. Forde. Dock & Harbour June, '26.

H. Railroads. Street and Interurban Railways. Automobiles. Aeronautics**a. Railroads****1. General Articles**

The Khyber Pass Railway.* (From *The Railway Engineer*, London.) Eng. & Contr. Apr. 21, '26.

Development of Industrial Sites and Trackage Layouts at Kansas City, Kansas, and Los Angeles, California, by the Union Pacific System.* Walter R. Armstrong. Am. Soc. C. E. May, '26.

Physical Condition of Mexican Railways Improving.* Raymond Chambers. Ry. Age May 8, '26.

The Domodossola-Locarno Italiano-Swiss Railway. Int. Ry. Cong. Assoc. Apr., '26.

Die Eisenbahnen Chinas.* (The Railways of China.) F. Baltzer. Zent. d. Bau. Feb. 17 '26.

Die Reichsbahn als Bauherr.* (The State Railway as a Builder.) Dormmüller. Z. d. Bauver. Serial beginning Mar. 31, '26.

3. Roadbed (Grading Construction Work)

Comparative Economy of Reduction in Ruling Grade and Length of Line. C. A. Morse. West. Soc. Engrs. Feb., '26.

Wire Pockets Stop Borrow Pit Wash.* W. H. Cleveland. Ry. Eng. & Main. Apr., '26.

Concrete Crib Walls Show Economics.* Ry. Rev. Apr. 24, '26.

How to Design Side Ditches for Cuts.* James F. Sherron, Jr. Ry. Rev. Apr. 24, '26.

Culvert Pipe 105 Feet Long Is Jacked Through 47-Ft. Fill.* E. J. Cullen. Ry. Eng. & Main. May, '26.

4. Track

On a New Magnetic Rail Defecto-Scope.* M. Suzuki. Int. Ry. Cong. Assoc. Apr., '26.

Track Device for Detecting Defects in Rails.* M. Suzuki. Eng. N. R. Apr. 1, '26.

Dependable Ties are Produced.* Ry. Rev. Apr. 10, '26.

Damage to Rails by Car Wheels.* T. H. Symington. Ry. Age Apr. 17, '26.

Improvements in Track Material Cut Maintenance Costs.* Ry. Eng. & Main. May, '26.

Second Track Project Faced Unusual Difficulties.* Ry. Age May 15, '26.

Les ruptures accidentelles des rails: les maux et les remèdes.* (Accidental Rail Fractures: the Faults and the Remedies.) M. Merkle. Rev. Gen. May, '26.

Matériel pour la dépose et la pose des voies du Great Southern Railway of Ireland.* (Equipment for Removing and Laying Rails on the Great Southern Railway of Ireland.) Gen. Civ. May 15, '26.

5. Signals and Safety Apparatus

Train Movements Directed by Signal Indication.* H. M. Sperry. (Abstract of paper read before Pittsburgh Ry. Club.) Ry. Age Apr. 3, '26.

Car Retarders Cut Down Costs.* Ry. Rev. Apr. 10, '26.

Car Retarders on Illinois Central.* Ry. Age Apr. 17, '26.

Report of Pneumatic Brake Tests.* Ry. Age Apr. 24, '26.

N. Y. C. Installs Miller Train Stop.* Ry. Age May 8, '26.

Nickel Plate First to Install Union Intermittent Train Stop.* J. H. Oppelt. Ry. Age May 15, '26.

Investigation Made of Brake Pipe Leakage.* Ry. Rev. June 5, '26.

Report of Committee on Brakes and Brake Equipment.* (A. R. A.) Ry. Age June 12, '26 (Daily ed.).

Note sur les particularités de l'organisation des postes centraux de régulation sur le réseau de l'Est.* (Note Upon the Details of the Organization of the Central Office of Regulation (Train Dispatching) on the Lines of the "Est.") M. Massin. Rev. Gen. Apr., '26.

6. Rolling Stock, Fuel

Diesel Locomotives.* Samuel M. Vauclain. Engrs. & Eng. Mar., '26.

Electromotive Locomotives and Motor Cars.* W. B. Potter. West. Ry. Club. Mar., '26.

The Garratt Locomotive.* Engr. Apr. 2, '26.

Great Northern Reduces Pitting of Locomotive Boilers.* Ry. Age Apr. 3, '26.

4-8-2 Type Locomotive for the South Australian Railways.* Eng. Apr. 16, '26.

Tender Truck Boosters on Switch Engines.* Ry. Rev. Apr. 17, '26.

Twenty Cars at Forty Miles an Hour.* Ry. Rev. Apr. 24, '26.

Road Tests Influence Locomotive Design.* H. A. F. Campbell. Ry. Rev. Apr. 24, '26.

Internal-Combustion Locomotives and Vehicles. Samuel M. Vauclain. Mech. Eng. May, '26.

On the Reduction of the Cost of Traction: Fuel and Its Combustion. Int. Ry. Cong. Assoc. May, '26.

High Speed Electric Locomotives. Int. Ry. Cong. Assoc. May, '26.

A New Development in Power Rail Cars.* A. W. Scarratt. (Paper read before Soc. Automotive Engrs.) Ry. Age May 1, '26.

New Coach Yard Equipped with Modern Commissary.* Ry. Age May 1, '26.

Motor Cars for Branch Line Economy.* Ry. Rev. May 1, '26.

Oil Electric Locomotives Show Economics. G. L. Garrison. Ry. Age May 8, '26.

U. P. Builds Largest Non-Articulated Engine.* Ry. Rev. May 15, '26.

Automotive Train Has Mechanical Drive.* A. W. Scarratt. Ry. Rev. May 22, '26.

Express Electric Locomotive for the Midi Railway Company of France.* Eng. May 28, '26.

Gas Electric Coaches Built for C. & A.* Lesley C. Paul. Ry. Rev. May 29, '26.

Deep Snow Doesn't Stop This Bus.* Ry. Rev. May 29, '26.

The Water Supply of the Chicago and North Western Railway. R. E. Coughlan. Am. W. W. Assoc. June, '26.

A Study Into Causes of Pitting and Corrosion in Locomotive Boilers.* William M. Barr. Ry. Rev. June 5, '26.

Improvements in Locomotive Economy Devices.* Ry. Rev. June 5, '26.

Report of Arbitration Committee. (A. R. A.) Ry. Age June 11, '26 (Daily ed.).

Committee on Loading Rules.* (A. R. A.) Ry. Age June 11, '26 (Daily ed.).

The Past, Present and Future of Water Treatment.* Ry. Age June 12, '26.

Service of Simple Mallets.* Henry Blanchard. Ry. Age June 12, '26.

Report of Committee on Car Construction.* (A. R. A.) Ry. Age June 12, '26 (Daily ed.).

- Report of Committee on Tank Cars.* (A. R. A.) Ry. Age June 12, '26 (Daily ed.).
 Report on Couplers and Draft Gears.* (A. R. A.) Ry. Age July 12, '26 (Daily ed.).
 How to Improve Locomotive Efficiency. H. H. Lanning. (Abstract of paper read before N. E. R. R. Club.) Ry. Rev. June 12, '26.
 New Type Boiler on a Three Cylinder Engine.* Ry. Rev. June 12, '26.
 Report on Locomotive Design and Construction.* (A. R. A.) Ry. Age June 15, '26 (Daily ed.).
 Report of Committee on Wheels.* (A. R. A.) Ry. Age June 15, '26 (Daily ed.).
 Report of Committee on Locomotive and Car Lighting. (A. R. A.) Ry. Age June 16, '26 (Daily ed.).
 Report on Utilization of Locomotives.* (A. R. A.) Ry. Age June 17, '26 (Daily ed.).
 Locomotive compound à grande vitesse.* (Compound Express Locomotive.) M. R. Vallatin. Rev. Gen. Feb., '26.
 Note sur les locotracteurs à essence de Paris-Saint Lazare.* (Internal Combustion Engines on the Paris-St. Lazare Route.) M. Polart. Rev. Gen. Mar., '26.
 Note sur le développement de la locomotive.* (Note on the Development of the Locomotive.) Maurice Demoulin. Gen. Civ. Mar. 20, '26.
 Nouvelle locomotive pétroleo-electrique.* (New Oil-Electric Locomotive.) P. C. Gen. Civ. Apr. 17, '26.
 Technische und wirtschaftliche Bedeutung des Verschleisswiderstandes von Eisenbahn- und Maschinenmaterialien.* (Technical and Economic Importance of the Resistance to Wear of Railway and Machine Materials.) M. Spindel. Oest. Ing. Arch. Ver. Mar. 19, '26.
 Wasserkammern Bauart Nicholson für Lokomotivfeuerbüchsen.* (Nicholson Type of Water Chambers for Locomotive Fire Boxes.) E. H. Metzeltin. Ver. deu. Ing. May 1, '26.
 Neue Lokomotiven für Brasilien.* (New Locomotives for Brazil.) Hermann Keller. Ver. deu. Ing. Serial beginning May 8, '26.
 Der Wärmeschutz bei Dampflokomotiven.* (Protection Against Heat Losses to Steam Locomotives.) Nordmann. Ver. deu. Ing. May 29, '26.
 7. Use of Electricity
 Electrification of the Illinois Central Railroad Suburban Service in Chicago.* W. M. Vanderluis. West. Soc. Engrs. Mar., '26.
 Electric Train Testing on the Metropolitan Railway.* George Hally. Engr. Serial beginning May 21, '26.
 Steam versus Electric Motive Power.* H. S. Peck. (Abstract of paper read before Int. Ry. Fuel Assoc.) Ry. Age May 29, '26.
 Report of Committee on Electric Rolling Stock.* (A. R. A.) Ry. Age June 16, '26 (Daily ed.).
 Electrification partielle du réseau de la Compagnie D'Orléans.* (Partial Electrification of the Compagnie d'Orléans System.) M. Parodi. Rev. Gen. Serial beginning Feb., '26.
 8. Stations, Terminals, Engine Houses, Shops
 Control of Traffic Movements at an Important Marshalling Yard on the Belgian State Railways.* H. De Caestecker. Int. Ry. Cong. Assoc. Apr., '26.
 Concrete Snow-Sheds Built on Unit Construction Plan.* Eng. N. R. Apr. 1, '26.
 Santa Fe Completes Reconstruction of Coast Line Shops.* Ry. Age Apr. 10, '26.
 Delaware & Hudson Has Well Equipped Store Department.* Ry. Age Apr. 10, '26.
 Terminals Important in Regional Planning.* Harold M. Lewis. (From paper read before Soc. Terminal Engrs.) Ry. Rev. Apr. 10, '26.
 Stations Should Fit Into the Scenery.* Ry. Rev. Apr. 10, '26.
 Air Rights Are Valuable.* David A. Wallace. Ry. Rev. Apr. 24, '26.
 Fighting the Spring Blizzard in the Chicago Terminals.* Ry. Age & Main. May, '26.
 Grand Trunk Western Builds Modern Terminal at Battle Creek.* Ry. Age May 1, '26.
 Lackawanna Builds Modern Structure for Light Car Repairs.* G. J. Ray. Ry. Age May 8, '26.
 Iselin Shop Shows Good Design.* Ry. Rev. May 8, '26.
 Union Pacific Type Locomotive.* Ry. Age May 15, '26.
 This Job Was Done Quickly; Balanced Turntable Replaced with Longer Twin Span in Just Over Four Hours.* H. S. Clarke. Ry. Rev. May 15, '26.
 Scrap Reclamation Saves a Million a Year.* Ry. Rev. May 22, '26.
 Boston & Albany Has Revolutionized Its Supply Conditions.* Ry. Age May 29, '26.
 Trucks Simplify Terminal Operation.* Geo. E. Boyd. Ry. Rev. May 29, '26.
 Dumping Plant for Grain Cars.* Eng. Serial beginning June 4, '26.
 Grand Trunk Builds New Engine Terminal.* Ry. Rev. June 5, '26.
 Wabash Builds New Freight Car Repair Shops.* Ry. Rev. June 5, '26.
 Lackawanna Reduces Scrap Handling Costs 72 Per Cent.* Ry. Age June 5, '26.
 Committee on Standardization and Simplification of Stores Stock.* (A. R. A.) Ry. Age June 11, '26.
 Reclamation and Handling of Scrap.* (A. R. A.) Ry. Age June 11, '26 (Daily ed.).
 Committee on Facilities for Handling Materials.* (A. R. A.) Ry. Age June 11, '26.
 The Lackawanna Has an Unusual Car Shop.* Ry. Rev. June 12, '26.
 Committee on Line Delivery of Material.* (A. R. A.) Ry. Age June 12, '26 (Daily ed.).
 Committee on Control of Line Stocks.* (A. R. A.) Ry. Age June 12, '26 (Daily ed.).
 Committee on Delivery of Material to Users at Shop.* (A. R. A.) Ry. Age June 12, '26 (Daily ed.).
 Committee on Purchasing Records and Organization.* (A. R. A.) Ry. Age June 12, '26 (Daily ed.).
 Unit Piling and Numbering of Material.* (A. R. A.) Ry. Age June 12, '26 (Daily ed.).
 Zweiter Bahnhof-Wettbewerb Genf-Cornavin.* (Second Competition for a Railway Station at Geneva-Cornavin.) Schw. Bau. Serial beginning May 29, '26.
 9. Technical and Commercial Use
 The Virtual Coefficients (Lengths) of Railway Lines. S. F. Balatroni. (From *Revista dei Trasporti*.) Int. Ry. Cong. Assoc. Apr., '26.
 Buses and Trucks Supply a Public Need.* Ralph Budd. Ry. Rev. Apr. 24, '26.
 Great Northern Largest Railway Bus Operator.* Ry. Age May 22, '26.
 B. & M. Buses Improve Rail Service.* Ry. Age May 22, '26.

Technische und Wirtschaftliche Bedeutung des Verschleisswiderstandes von Eisenbahn- und Maschinenmaterialien.* (Technical and Economic Importance of the Resistance to Wear of Railway and Machine Materials.) M. Spindel. Oest. Ing. Arch. Ver. Mar. 19, '26.

x. Miscellaneous

Douglas Fir Fills Every Railroad Need.* C. J. Hogue. Ry. Rev. Apr. 17, '26.
Reclamation of Scrap Material Profitable.* Henri P. Le Blanc. Ry. Rev. May 1, '26.
Committee on Purchase of Equipment and Large Material Contracts.* (A. R. A.) Ry. Age June 11, '26 (Daily ed.).
Report on Specifications and Tests for Materials.* (A. R. A.) Ry. Age June 11, '26 (Daily ed.).

b. Special Railroads

2. Aerial Railroads

Dispositif de sécurité dans les funiculaires aériens pour voyageurs.* (Safety Device for Passenger Aerial Tramways.) F. Crestin. Gen. Civ. May 29, '26.
Der Bau der Zugspitzbahn.* (The Construction of the Zugspitz Railway.) Robert Findels. Oest. Ing. Arch. Ver. Jan. 8, '26.

d. Street Railways, Elevated Railways, Subways

1. General Articles

Fifty Pedestrian Subways Planned for Los Angeles.* Robert H. Bacon. Eng. N. R. June 10, '26.
New York's Third Subway Under Construction.* Eng. N. R. June 17, '26.
Die Pariser Ufergrundbahnen.* (The Paris Subways.) Emil A. Roth. Oest. Ing. Arch. Ver. Jan. 8, '26.
Erweiterung der Berliner Nordsüdbahn in Richtung Tempelhof.* (Extending the Berlin North-South Railway in the Direction of Tempelhof.) Honroth. Z. d. Bauver. Mar. 17, '26.
5. Rolling Stock
Electromotive Locomotives and Motor Cars.* W. B. Potter. West. Ry. Club Mar., '26.
Les omnibus à trolleys.* (Trolley Omnibuses.) Gen. Civ. Apr. 3, '26.

e. Automobiles

3. Electric Automobiles

Gas Electric Drive for Buses Efficient.* H. L. Andrews. (Abstract of paper read before N. Y. R. R. Club.) Ry. Rev. May 29, '26.

f. Aeronautics

1. General Articles

Technical Progress in Aeronautics.* Edwin E. Aldrin. Mech. Eng. Apr., '26.
Operation of the Air Mail and its Possible Application to Commercial Operations. J. E. Whitbeck. Mech. Eng. May, '26.
Maintenance and Depreciation of Airplanes and Engines. Ernest W. Dichman. Mech. Eng. June, '26.
Aviation and Modern Engineering Practice.* E. W. Stedman. Eng. Inst. Can. June, '26.
4. Aerodromes and Landing Fields
Airways and Airdromes. Paul Henderson. Engrs. & Eng. May, '26.

I. Municipal Water-Works, Agricultural Engineering, Irrigation

a. General Articles

Report of the Metropolitan Water Supply Investigating Commission. N. E. W. W. Assoc. Mar., '26.
The Improvement of the Water Supply of Keene, N. H.* Robert Spurr Weston and G. A. Sampson. N. E. W. W. Assoc. Mar., '26.
The Massachusetts Water Report.* Allen Hazen. N. E. W. W. Assoc. Mar., '26.
The Municipal Water and Light Plant at Orlando, Florida. W. W. Mathews. Am. W. W. Assoc. Mar., '26.
Water Supply Conditions in Missouri.* George W. Putnam. Am. W. W. Assoc. Mar., '26.
The Need for Data Relating to Water. N. C. Grover. Am. W. W. Assoc. Apr., '26.
Office Administration of City Water Department. D. C. Grobbel. Am. W. W. Assoc. Apr., '26.
The Quality Problem in Relation to Chicago's Water Supply. John Ericson. Eng. & Contr. Apr. 14, '26.
New Bay City (Mich.) Water-Works Displaces Two Old Plants.* J. W. Ellms. Eng. N. R. Apr. 29, '26.
Co-Ordination of Irrigation and Power. Discussion: C. S. Jarvis and William Kelly. Am. Soc. C. E. May, '26.
Supply the Water Works Working. C. R. Henderson. Am. W. W. Assoc. May, '26.
Supply, Intake and Storage. William Gore. Am. W. W. Assoc. May, '26.
Town of 4 000 Spends \$90 Per Capita for Water and Sewage.* Webster L. Benham. Eng. N. R. May 27, '26.
Toronto Duplicate Water Works System.* Wm. Gore and H. G. Acres. Can. Engr. June 1, '26.
Analysis of Service Demand.* (From Report by William Gore and Henry G. Acres.) Can. Engr. June 1, '26.
Water Works Extension, Hamilton, Ont.* Can. Engr. June 8, '26.
L'Alimentation en eau de San Francisco: Les installations hydro-électriques et l'aqueduc de Hetch Hetchy.* (San Francisco Water Supply; Hetch Hetchy Hydroelectric Installations and the Aqueduct.) P. Calfas. Gen. Civ. Mar. 6, '26.

b. Hydrology, Water Resources

- Ground Water Resources of Illinois. G. C. Habermeyer. Am. W. W. Assoc. Mar., '26.
 Water Supply for Arlington County, Virginia. Mun. & Co. Eng. Apr., '26.
 Tunnel Driving and Shaft Sinking in Slaking Rock.* Eng. N. R. Apr. 8, '26.
 Improvements to the Water Supply of Winner, South Dakota. Geo. T. Prince. Am. W. W. Assoc. May, '26.
 Building Cellular Wall Cofferdam, St. Louis Intake.* John C. Pritchard. Eng. N. R. May 27, '26.
 Well-Water Development with Air Lifts at Lansing, Mich.* L. R. Howson. Eng. N. R. May 27, '26.
 Moot Questions in the Design of Lake Intakes*. Paul Hansen. Eng. N. R. May 27, '26.
 Aspects of Steam Power in Relation to a Hydro Supply.* A. H. Markwart. Mech. Eng. June, '26.
 Die Wasserversorgung von Gross-Stuttgart.* (The Water Supply for Greater Stuttgart.) Hermann Werner. Gesund. Ing. Jan. 30, '26.
 Die neue Stuttgarter Trinkwasser-Versorgung aus dem Schwarzwald.* (The New Stuttgart Potable Water Supply from the Black Forest.) Hermann Werner. Gesund. Ing. Apr. 10, '26.

c. Dams and Reservoirs

- Reconstructing the Calaveras Dam by Dry Fill.* G. A. Elliott. Eng. N. R. Apr. 1, '26.
 Multiple-Arch at Gem Lake on Rush Creek, California. Discussion: Fred O. Dolson and Walter L. Huber. Am. Soc. C. E. May, '26.
 Multiple-Arch Dam at Gem Lake on Rush Creek, California. Discussion: Fred O. Dolson and Walter L. Huber. Am. Soc. C. E. May, '26.
 Re-Lining the Verona Reservoir. Charles L. Crosier. Am. W. W. Assoc. May, '26.
 Lining an Earth Spillway Channel with Concrete.* C. E. Blee. Eng. N. R. May 13, '26.
 Arch Dam of Thin Section Now in Service on Salt River.* Eng. N. R. May 13, '26.
 Asphalt Grouting Under Hales Bar Dam.* George W. Christians. Eng. N. R. May 20, '26.
 Unique Reservoir Lining for Port Angeles, Wash.* M. P. Hatcher and E. L. Ferguson. Eng. N. R. May 27, '26.

d. Analysis and Purification of Water

- Review of the Nineteenth Annual Report on Water Examination. London Metropolitan Water Board. N. E. W. W. Assoc. Mar., '26.
 Chlorophenol-Like Tastes in Bay City's Filtered Water Supply.* Louis B. Harrison. Am. W. W. Assoc. Mar., '26.
 Improvement of Settling Basins.* W. H. Kimball. Am. W. W. Assoc. Mar., '26.
 Sampling of Filter Sand.* W. S. Mahlie. Am. W. W. Assoc. Mar., '26.
 Zeolite Softening Plant of the Ohio Valley Water Company.* F. B. Beech. Am. W. W. Assoc. Mar., '26.
 The Prevalence of Simple Goiter and Its Relation to Iodin Content of Water and Foods. J. F. McClendon. Am. W. W. Assoc. Mar., '26.
 The Causes and Prevention of Red Water. Paul C. Laux. Am. W. W. Assoc. Mar., '26.
 Seasonal Variations in the Ammonia and Nitrate Content of Lake Waters.* B. P. Domogalla, E. B. Fred and W. H. Peterson. Am. W. W. Assoc. Apr., '26.
 Additions to the Evanston, Illinois Filter Plant. Paul Hansen. Am. W. W. Assoc. Apr., '26.
 Placarding Public Water Supplies Along Tourist Highways. Earle L. Waterman. Am. W. W. Assoc. Apr., '26.
 English Comments on Addition of Iodine to Drinking Water to Prevent Thyroidism. Am. W. W. Assoc. Apr., '26.
 Chlorination of Water and Sewage.* Earle B. Phelps. Bost. Soc. C. E. Apr., '26.
 Iron and Manganese Troubles. W. F. Montfort. (From paper read before Missouri Conference on Water Eng.) Eng. & Contr. Apr. 14, '26.
 Laboratory Reaction Apparatus Helps Operate Filters.* Charles H. Spalding. Eng. N. R. Apr. 22, '26.
 Algae in Water Supplies. N. L. Huff. Am. W. W. Assoc. May, '26.
 The Pollution of Water Supplies by Wastes from Canneries and Dairies in Iowa.* J. H. Buchanan. Am. W. W. Assoc. May, '26.
 Permanent Standards for Water Analysis.* F. R. Georgia. Am. W. W. Assoc. May, '26.
 Water Purification for Small Cities. H. V. Pedersen. Am. W. W. Assoc. May, '26.
 New Water Pumping and Filtration Plants, Hannibal, Mo.* M. P. Hatcher. Eng. N. R. May 6, '26.
 What the Health Officer Can Learn from the Sanitary Engineer. Harrison P. Eddy. (From paper read before Conference of Health Officers and Public Health Nurses.) Eng. & Contr. May 12, '26.
 Pneumatic Filter-Alum Conveyor for Minneapolis Water Filters.* J. A. Jensen. Eng. N. R. May 13, '26.
 Reaction of Ortho-Tolldine with Surface Waters. Ole Forsberg. Am. W. W. Assoc. June, '26.
 Prevention of Corrosion and "Red Water." John R. Baylis. Am. W. W. Assoc. June, '26.
 Cross-Connections in Chicago.* Arthur E. Gorman. Am. W. W. Assoc. June, '26.
 Rapid Sand Filtration. Am. W. W. Assoc. June, '26.
 Copper in the Distribution System Following Watershed Treatment.* F. E. Hale and Henry F. Muer. Am. W. W. Assoc. June, '26.
 New Filtration Plant at Welland, Ont.* E. R. Smallhorn. Can. Engr. June 1, '26.
 How Turbid Colorado River Water Was Made Fit to Drink.* Irving C. Harris. Eng. N. R. June 3, '26.
 Graphical Chemistry in Water Softening.* R. L. McNamee. Eng. & Contr. June 9, '26.

e. Distribution of Water

- Cement-Lined Cast-Iron Pipe.* Charles W. Sherman. N. E. W. W. Assoc. Mar., '26.
 Water Bureau Interests During the Construction of the North Broad Street Subway, Philadelphia. S. M. Van Loan. Am. W. W. Assoc. Mar., '26.

- The Spacing of Fire Hydrants. F. H. King. Am. W. W. Assoc. Mar. '26.
 Baltimore City Water Department Meets Emergency During Drought of June, 1925. V. Bernard Slems. Am. W. W. Assoc. Mar., '26.
 The Improved Flume. Ralph L. Parshall. Discussion. Am. Soc. C. E. Apr., '26.
 Determination of the Duty of Water in Water-Right Adjudications. Am. Soc. C. E. Apr., '26.
 The Installation of Meters in Erie. D. W. Harper. Am. W. W. Assoc. Apr., '26.
 Seismic Activity in Santa Barbara.* V. E. Trace. Am. W. W. Assoc. Apr., '26.
 Evaporation on United States Reclamation Projects.* Discussion: H. S. Kleinschmidt, Robert Follansbee, R. I. Meeker, and B. E. Torpen. Am. Soc. C. E. Apr., '26.
 Irrigation Development Through Irrigation Districts. Discussion: Richard R. Lyman and J. B. Lippincott. Am. Soc. C. E. Apr., '26.
 Land Settlement of Irrigation Projects. Discussion: W. G. Swendsen and Charles H. West. Am. Soc. C. E. Apr., '26.
 The Financing of Irrigation Developments by Private Capital. Discussion: John E. Field. Am. Soc. C. E. Apr., '26.
 History and Problems of Irrigation Development in the West. Discussion: Samuel Fortier, Arthur P. Davis, C. E. Grunsky and F. H. Newell. Am. Soc. C. E. Apr., '26.
 Permissible Canal Velocities.* Discussion: J. C. Stevens, Carl Rohwer and Ivan E. Houk. Am. Soc. C. E. Apr., '26.
 The Slade Heath Pumping Station of the South Staffordshire Waterworks Company.* Eng. Serial beginning Apr. 2, '26.
 Plotting a Life Line for Tacoma's Water Supply Conduit.* W. A. Kunigk. Eng. N. R. Apr. 8, '26.
 An Efficient Waterworks Pumping Plant.* Engr. Apr. 16, '26.
 Studies Upon Factors Affecting per Capita Water Consumption. Leonard Metcalf. (Paper read before Penn. W. W. Assoc.) Apr. 14, '26.
 Water Supply Situation at Border Cities.* Can. Engr. Apr. 27, '26.
 Flow of Water in 54-In. Concrete Conduit, Denver, Colo.* Fred C. Scobey. Eng. N. R. Apr. 29, '26.
 The Water Works Pumping Station. Robert W. Angus. Am. W. W. Assoc. May, '26.
 Services and Meters.* E. V. Buchanan. Am. W. W. Assoc. May, '26.
 The Menace of Cross-Connections in a Public Water Supply. R. F. Goudey. Am. W. W. Assoc. May, '26.
 Determination of the Duty of Water in Water-Right Adjudications: Report of the Duty of Water Committee of the Irrigation Division of the American Society of Civil Engineers. Discussion: E. A. Porter and Lloyd Garrison. Am. Soc. C. E. May, '26.
 Evaporation on United States Reclamation Projects. Discussion: C. S. Jarvis. Am. Soc. C. E. May, '26.
 Permissible Canal Velocities. Discussion: Samuel Fortier and Fred C. Scobey. Am. Soc. C. E. May, '26.
 Evaporation on United States Reclamation Projects. Discussion: C. S. Jarvis. Am. Soc. C. E. May, '26.
 Interstate Water Problems and Their Solution. Discussion: Frank C. Emerson. Am. Soc. C. E. May, '26.
 Charleston, S. C., Builds 2,000,000-Gal. Elevated Steel Tank.* Eng. N. R. May 27, '26.
 Experience with Riveted Pipe in San Francisco Water-Works.* George W. Pracy. Eng. N. R. May 27, '26.
 Factors Considered in Designing Largest Pumping Station.* Loran D. Gayton. Eng. N. R. May 27, '26.
 Applying Cement Lining by Centrifugal Means to Cast Iron and Steel Pipes.* Donald Moir. Am. W. W. Assoc. June, '26.
 Automatic Primers for Centrifugal Pumps. F. H. Bradford. Am. W. W. Assoc. June, '26.
- f. Drainage of Land**
 Present Policy of the United States Bureau of Reclamation Regarding Land Settlement. Discussion: B. A. Etcheverry and Thomas H. Means. Am. Soc. C. E. April, '26.

x. Miscellaneous

- The Economy of Municipal Bonds for Water Works Construction.* Charles W. Sherman. N. E. W. W. Assoc. Mar., '26.
 Financing Water Main Installations.* D. A. Reed. Am. W. W. Assoc. Mar., '26.
 Financial Reports of Water Works Operation. H. F. Blomquist. Am. W. W. Assoc. May, '26.
 Financing Waterworks Projects. C. N. Phillips. Am. W. W. Assoc. June, '26.
 Accounting Methods for Water Works. Harold D. Smith. Eng. & Contr. June 9, '26.

J. Sewerage. Sewage and Refuse Disposal

a. Sewers and Drains

- Toledo Intercepting Sewer System—Basis for Design.* Harvey P. Jones. Eng. N. R. Apr. 1, '26.
 Modern Methods of Sewage Disposal.* F. Johnstone Taylor. Can. Engr. Apr. 6, '26.
 Toledo Intercepting Sewers—11: Regulators, Siphons.* Harvey P. Jones. Eng. N. R. Apr. 15, '26.
 Safety Precautions in Excavating Work. George Hess. (Paper read before Fifth Annual Industrial Safety School, Los Angeles.) Mun. & Co. Eng. May, '26.
 Toledo Intercepting Sewers.—111: Discharge Works.* Harvey P. Jones. Eng. N. R. May 6, '26.
 Sewer Pipes Laid by Boring.* Engr. May 21, '26.
 Ueber grossstädtische Regenwasserabflüsse. (Rain Water Run-off in Large Cities.) A. Heilmann. Gesund. Ing. Feb. 20, '26.
 Die Zweckmässigste Bauart der Strasseneinläufe.* (Most suitable type of construction for the entrance to street cesspools.) Franz v. Reiche. Gesund. Ing. Apr. 24, '26.

b. Sewage Disposal, Purification

- Sewage Disposal at St. Stephen's College.* Fred J. Biele. Cornell C. E. Mar., '26.
 Interstate Pollution of Streams. H. M. Beardsley. Am. W. W. Assoc. Apr., '26.
 Residual Chlorine and the Bacterial Content of Swimming Pools.* E. B. Buchanan and R. G. Perkins. Am. W. W. Assoc. Apr., '26.
 Ortho-Toluidin and Starch Iodide Tests for Free Chlorine in Chlorinated Sewage Tank Effluents.* Walter V. D. Tiedeman. Am. W. W. Assoc. Apr., '26.
 Chlorination of Water and Sewage.* Earle B. Phelps. Bost. Soc. C. E. Apr., '26.
 The Partial Purification of Sewage. H. C. Whitehead. (Paper read before Public Works, Roads and Transport Cong., London.) Can. Engr. Apr. 13, '26.
 Operation of Indoor Swimming Pools.* R. F. Heath. Can. Engr. Apr. 20, '26.
 Some Aspects of Sewage Treatment. Arthur J. Martin. (Paper read before Managers of Sewage Disposal Works.) Can. Engr. Apr. 27, '26.
 Separate Sludge-Digestion System for Small Town Use.* Jerry Donohue. Eng. N. R. Apr. 29, '26.
 Decatur Sewage Pre-aeration Experiment Triples Filter Rate. Eng. N. R. Apr. 29, '26.
 Stream Pollution. A Symposium. Discussion: William Firth Wells and J. K. Hoskins. Am. Soc. C. E. May, '26.
 Water Supply and Sewage Disposal of the Great Lakes. Joseph W. E. Elhms. Am. W. W. Assoc. May, '26.
 What the Health Officer Can Learn from the Sanitary Engineer. Harrison P. Eddy. (From paper read before Conference of Health Officers and Public Health Nurses.) Eng. & Contr. May 12, '26.
 Twenty-five Years of Sewage Disposal in France. M. Bezault. Inst. Mun. & Co. Engrs. May 25, '26.
 The Coli-Aerogenes Group in Soil.* Stewart A. Koser. Am. W. W. Assoc. June, '26.
 Large Screening Plant Handles Los Angeles Sewage.* Eng. N. R. June 3, '26.
 Sanitary Conservation of Streams. (Progress report of Comm. read before State Sanitary Engrs.) Eng. & Contr. June 9, '26.
 Sewage Treatment at Hackensack, N. J.* P. N. Daniels and C. M. Nichols. (From *Public Health News*.) Eng. & Contr. June 9, '26.
 Effect of Chlorination on Trickling Sewage Filters.* Morris M. Cohn. Eng. N. R. June 10, '26.
 L'Epuraton des eaux usées en Hollande.* (Purification of Industrial Waters in Holland.) E. Cauterman. Assoc. Ing. Gand.; v. 50, pt. 4, '26.

K. Heat Engines

a. Steam Engines, Boilers

- Untersuchungen an der 60 at-Dampfkraftanlage von A. Borsig.* (Investigations at the A. Borsig steam power plant operation at 60 atmospheres.) E. Josse. Ver. deu. Ing. May 22, '26.
 Die Dampfkraft im Elektrizitätswerk.* (Steam power in electricity plants.) Ph. Scholtes. Ver. deu. Ing. May 22, '26.

b. Steam Turbines

- L'Amélioration du rendement de l'ailetage à réaction des turbines à vapeur.* (Improving the Efficiency of the Blading of Reaction Steam Turbines.) M. Hentsch. Gen. Civ. Mar. 6, '26.
 Résultats des essais effectués sur les groupes électrogènes de l'usine de Chancy-Pougny.* (Results of tests made upon the generating sets of the Chancy-Pougny works.) P. Perrochet. Schw. Bau. Serial beginning May 8, '26.
 Dampfturbinen für hohen Druck.* (Steam turbines for high pressure.) Ver. deu. Ing. May 22, '26.

c. Gas and Oil Engines

- The High Efficiency Oil-Engine.* Alan E. L. Chorlton. (Paper read before Inst. Mech. Engrs.) Eng. Mar. 26, '26.

x. Miscellaneous

- Séance solennelle du mercredi 20 janvier 1926 pour la commémoration du centenaire de la publication de l'ouvrage de Léonard Sadi Carnot: "Reflexions sur la puissance motrice du feu."* (Solemn Meeting on Wednesday, January 20, 1926, for the Commemoration of the Centenary of the Publication of the Work of Leonard Sadi Carnot: "Reflexions sur la puissance motrice du feu.") Soc. Ing. Civ. Fr. Jan.-Feb., '26.
 Wärmeforschung im Verein deutscher Ingenieure. (Therman Research in the Verein deutsche Ingenieure.) Dr. A. Ver. deu. Ing. Feb. 20, '26.

L. Electricity

b. Distribution and Transmission of Electricity

1. Storage Batteries and Cells
 Improvements in Power Plants Cut Fuel Costs.* C. M. Barbour. Ry. Eng. & Main. Apr., '26.
 Enlarged Narragansett Plant Embodies Unusual Engineering Features.* D. H. Couch and Robert L. Blanding. Power May 4, '26.
 Die Elektrizitätsversorgung Ostpreussens und die Wasserkraftwerke an der Alle bei Friedland und Gr.-Wohnsdorff.* (Electricity supply of East Prussia and the water power plants on the Alle at Friedland and Gr. Wohnsdorff.) Wiehler. Zeit. Bau. Heft II Ing. 1 bis 3, '26.

- Das Kraftwerk Amsteg der S. B. B. II Hochbaulicher Teil.* (Amsteg power plant of the Swiss Federal Railways.) Nager. Schw. Bauz. Serial beginning Mar. 27, '26.
- Wasserkraftanlage on der Ager bei Lenzing Oberösterreich.* (Water power plant on the Ager near Lenzing, Upper Austria.) Justus Schubert. Oest. Ing. Arch. Ver. Apr. 16, '26.
- Das Kraftwerk Mühleberg der Bernischen Kraftwerke A.-G.-Baulicher Teil.* (Mühleberg power plant of the Bernische Kraftwerke A.-G. construction plant.) E. Meyer. Schw. Bau. May 29, '26.
2. Magneto and Dynamo. Electric Machines
- Sag Calculations for Transmission Lines.* H. B. Dwight. A. I. E. E. June, '26.
- Nouvelle grue Toplis à déplacement horizontal de la charge.* (New Toplis crane with horizontal displacement of the load.) P. C. Gen. Civ. May 1, '26.
5. Transformers and Converters
- Mechanics of the Electric Field.* (A Kelvin Lecture.) Eng. May 21, '26.
- Modern Problems of Synchronous Converters.* E. B. Shand. Eng. Inst. Can. June, '26.

d. Mechanical Uses of Electricity

1. Electric Motors
- Sectional Electric Drive for Paper Machines.* R. N. Norris. A. I. E. E. May, '26.
2. Servomotors, Holsts, Elevators, Handling Machinery
- The Development of the Sectional Paper-Machine Drive.* H. W. Rogers. A. I. E. E. Apr., '26.
- x. Miscellaneous
- Can the Thermal Capacity of Electric Machines Be Made a Simple and Practical Element of Rating.* A. E. Kennelly. A. I. E. E. May, '26.
- f. Signals and Communication
- The Elasticity of Wires and Cables.* H. W. Swift. Eng. Serial beginning Apr. 30, '26.
- Tests of Paper-Insulated High-Tension Cable.* F. M. Farmer. A. I. E. E. May, '26.
- Building a Talk Bridge Over the Sea.* Orrin E. Dunlap, Jr. Sci. Am. July, '26.
- Zur Eröffnung des neuen Grossenders in Wier.* (The Opening of the New Large Sending Station in Vienna.) Oest. Ing. Arch. Ver. Feb. 19, '26.

M. Architecture

a. Educational, Government and Scientific Buildings

- The Galileo Memorial Sun Tower, Florence.* C. Du Riche Preller. Eng. Apr. 30, '26.
- Zum Bau des zweiten Zentralgebäudes der Wiener gewerblichen Fortbildungsschulen.* (On the Construction of the Second Central Building of the Vienna Industrial Continuation School.) Josef Hofbauer and Wilhelm Baumgarten. Oest. Ing. Arch. Ver. Jan. 22, '26.
- Neubau der Technischen Hochschule Stuttgart.* (New construction for the Stuttgart Technical High School.) Heinrich Jaassy. Z. d. Bauver. Apr. 7, '26.
- Zum Wettbewerb für den Entwurf einer Strafgefängnistype in Bulgarien.* (Competition for the design of a penitentiary in Bulgaria.) Oest. Ing. Arch. Ver. Apr. 30, '26.

b. Business and Commercial Buildings

- Steel windows in the Commercial and Industrial Building.* R. B. Howes. Eng. & Contr. Apr. 28, '26.
- Die Schauöffnung im Mittelalter die Vorgängerin des neuzeitigen Schaufensters.* (The Open Displays in the Middle Ages the Predecessor of the Modern Shop Window.) Bahn. Z. d. Bauver. Mar. 24, '26.

c. Residences, Hotels

- Städtebau und Wohnungswesen in den Vereinigten Staaten.* (City construction and dwelling conditions in the United States.) Walter Curt Behrendt. Zeit. Bau. 4-6, Heft. (Hoch), '26.
- Die Heizungsfrage im Wohnungsbau.* (The heating question in dwelling construction.) Konrad Meier. Gesund. Ink. Mar. 27, '26.
- Das Gemeindehaus mit eingebauten Möbeln, XIV., Rauchfangkehrergasse, nach dem Entwürfe von Arch. Anton Brenner.* (Community dwellings with built-in furnishings, XIV Rauchfangkehrergasse, according to the design of Architect Anton Brenner.) Oest. Ing. Arch. Ver. Apr. 16, '26.

d. Storage Buildings

- Warehouse Embodies Latest Industrial Building Design.* Eng. N. R. June 3, '26.

e. Hospitals and Asylums

- Ueber Beleuchtung und Lüftung von Operationssälen.* (On the illumination and the ventilating of operating rooms.) Weissgerber. Z. d. Bauver. Mar. 31, '26.
- Wettbewerb für das Lory-Spital in Bern.* (Competition for the Lory Hospital in Bern.) Schw. Bauz. Serial beginning Apr. 3, '26.

f. Factories and Mill Buildings

- Wind Bracing in Industrial and Many-Storeyed Buildings.* Robins Fleming. Bost. Soc. C. E. May, '26.
- Richtlinien für systematische Grundrisslösungen und Reorganisation und Reorganisation von Industriebauten.* (Guides for systematic planning, reconstruction and reorganization of industrial buildings.) Bruno Bauer. Oest. Ing. Arch. Ver. Mar. 19, '26.
- Richtlinien für systematische Grundrisslösungen und Reorganisation und Reorganisation von Industriebauten.* (Criteria for systematic layout of ground floor plan and reorganization of industrial buildings.) Bruno Bauer. Oest. Ing. Arch. Ver. Mar. 19, '26.
- Baustofffragen bei Fabrikanlagen.* (Building material questions in the factory plant.) Rudolf Bernhard. Ver. deu. Ing. Mar. 27, '26.

g. Other Buildings

- Notes on the Construction of the Kentucky University Stadium.* D. V. Terrill. Eng. N. R. May 6, '26.
 Toronto Baseball and Athletic Stadium.* T. R. Loudon. Can. Engr. Apr. 27, '26.
 Massive Reinforced-Concrete Church in Los Angeles.* G. H. Schulte. Eng. N. R. Apr. 29, '26.
 Neuere Kirchenbaukunst.* (Modern Ecclesiastical Architecture.) G. Steinlein. Zent. d. Bau. Feb. 24, '26.
 Zürcher Hallenschwimmbad.* (Zurich Indoor Swimming Pool.) Otto Gschwind. Schw. Bauz. Feb. 27, '26.
 Turnhalle in Wülflingen.* (Gymnasium in Wülflingen.) K. Kaczorowski. Schw. Bauz. Mar. 6, '26.
 Das Stadion der Stadt Ulm a. d. Donau.* (The Stadium for the City of Ulm on the Danube.) K. Z. d. Bauver. Mar. 17, '26.

h. Roofs, Domes

- Zur Entwicklung der unterzuglosen Decke in der Schweiz und in Amerika.* (Development of floors without joists in Switzerland and America.) R. Maillart. Schw. Bau. May 22, '26.
 Schindeldeckung in niederschlesischen Gebirge.* (Shingle Roofing in the Lower Silesian Mountains.) Stölterfoht. Z. d. Bauver. Mar. 17, '26.

i. Fire Protection

- Progress of Fire Prevention in Canada. George F. Lewis. (Paper read before Canadian Fire Marshals.) Can. Engr. May 25, '26.
 The Business Side of Private Fire Protection. Dow R. Gwinn. Am. W. W. Assoc. June, '26.
 Fire Test of Light-weight Floor of Poured Gypsum Concrete.* A. H. Beyer. Eng. N. R. June 17, '26.
 Seismometrische Messung der Verkehrerschütterungen von Gebäuden.* (Seismometric measurement of the vibration of buildings by traffic.) H. Wittig. Z. d. Bauver. May 26, '26.

x. Miscellaneous

- Amerikanische Architektur.* (American architecture.) Schw. Bau. May 8, '26.
 Konstruktion und Schönheit.* (Construction and Beauty.) P. M. Schw. Bau. May 22, '26.

O. Administration. Legislation. Economics. Statistics

b. Economic Questions of a General Character; Valuations, etc.

- Patents and Inventions. Gerald S. Roxburgh. Eng. Inst. Can. June, '26.

d. Administrative and Financial Management of Means of Communication

1. General Questions

- Correlation of Transportation Agencies. C. C. Williams. (Paper read before Univ. of Illinois.) Mun. & Co. Eng. Mar., '26.

2. Routes and Roads

- Urban Aspects of Highway Finance. Jacob Viner. (From *Public Roads*.) Mun. & Co. Eng. May, '26.

5. Railroads and Street Railways

- Les chemins de fer Allemands et les résultats de la première année d'application du plan Dawes. (German Railways and the Results of the First Year of the Application of the Dawes Plan.) Rev. Gen. Feb., '26.
 Les résultats d'exploitation du réseau des chemins de fer de l'Etat en 1924. (The Operating Results of the State Railway System in 1924.) Rev. Gen. Serial beginning Feb., '26.

t. Engineering Ethics

- New Code of Ethics for Contractors. (Assoc. General Contra. of America.) (From *Public Works*.) Can. Engr. May 18, '26.

g. Engineering Education

- "English for Engineers"? Never! C. Ralph Bennett. Eng. N. R. Apr. 29, '26.
 Aesthetics in Engineering. L. H. Provine. (Paper read before Univ. of Illinois.) Eng. & Contr. May 5, '26.
 Science and Engineering. William F. Durand. (From paper read before Am. Assoc. Adv. of Science.) Eng. & Contr. May 12, '26.
 Engineering College Renders Six Distinct Services to Industry. E. J. Mehren. June 10, '26.

x. Miscellaneous

- Science and Engineering. William F. Durand. Mech. Eng. Apr., '26.

Q. Surveying and Geodesy

- City Lot Surveys.* Wakeman F. Sherwood. Cornell C. E. Mar., '26.
 Topographical and Exploration Surveys. T. H. Bartley. (Paper read before Ontario Land Surveyors Assoc.) Can. Engr. Mar. 23, '26.
 Restoration of Survey Monuments in West. T. S. Nash. Can. Engr. Apr. 6, '26.
 Rapid Topographic Methods. L. B. Roberts. (Report read before Am. Assoc. Adv. of Science.) Eng. & Contr. Apr. 21, '26.
 Tacheometer Diagram.* W. Norman Thomas. Inst. Mun. & Co. Engrs. Apr. 27, '26.

- Field Procedure of Adjusting the Great Circle Line to the Rhumb Line.* N. B. Switzer. Am. Soc. C. E., May, '26.
 Map of the Grand Canyon National Park.* Francois E. Matthes and Richard T. Evans. Mtl. Engr. May-June, '26.
 Die geodätischen Grundlagen der Vermessungen im Kanton Luzern.* (The geodetic bases for surveying in the canton of Luzern.) H. Zölly. Schw. Bauz. May 15, '26.

R. Landscape Engineering

- Landscape Architecture in the Middle West.* Karl B. Lohmann. Land. Arch. Apr., '26.
 Florida Plants. Willem C. Van der Laan and William Dorr Legg. Land. Arch. Serial beginning Apr., '26.
 La construction des pièces d'eau dans les parcs publics et jardins privés.* (The Construction of Lakes in Public Parks and Private Gardens.) J. B. Evrard. Ann. T. P. Belg. Feb., '26.
 Der neue Basler Gottesacker am Hörnli.* (The New Basle Cemetery at Hörnli.) F. Bräuning. Schw. Bauz. Serial beginning Mar. 13, '26.

S. City Planning

- Should Shack-Towns Be Encouraged?*. A. G. Dalzell. Can. Engr. Mar. 23, '26.
 Regional Planning and Urban Growth. Thomas Adams. (Paper read before Town Planning Inst. Can.) Can. Engr. May 18, '26.
 Städtebau und Wohnungswesen in den Vereinigten Staaten.* (City construction and dwelling conditions in the United States.) Walter Curt Behrendt. Zeit. Bau. 4-6, Heft. (Hoch), '26.
 Zum regulierungsplan für Spalato.* (On the City Plan for Spalato.) E. Böck. Oest. Ing. Arch. Ver. Jan. 8, '26.
 Die Kleinhaussiedlung am Flusse Aniene bei Rom.* (The Group of Small Dwellings on the Aniene River near Rome.) J. St. Zent. d. Bau. Feb. 17, '26.

Employment Service

The Engineering Societies Employment Service is under the joint management of the National Societies of Civil, Mining, Mechanical, and Electrical Engineers. A Chicago office is maintained in co-operation with the Western Society of Engineers, and a San Francisco office, in co-operation with the Engineers' Club of San Francisco and the California Section of the American Chemical Society. The Service is available only to the several memberships and is maintained by contributions from the Societies and their individual members who are directly benefited.

Officers.—Eastern Office, 33 West 39th Street, New York, N. Y., Walter V. Brown, Manager; Chicago Office, 53 West Jackson Boulevard, Room 1736, Chicago, Ill., A. Krauser, Manager; and San Francisco Office, 57 Post Street, Room 715, San Francisco, Calif., Newton D. Cook, Manager.

Men Available.—Under this heading, brief announcements will be published without charge. These announcements will not be repeated, except on request received after an interval of one month. Names and records will remain in the active files of the Service for a period of three months, and are renewable on request. Notices for *Proceedings* should be addressed to Employment Service, 33 West 39th Street, New York, N. Y., and should be received prior to the first of the month.

Opportunities.—A Bulletin of engineering positions available is published weekly and may be obtained by members of the Societies concerned at a subscription rate of \$3 per quarter, or \$10 per annum, payable in advance. Positions which are not filled promptly as a result of publication in the Bulletin, may be announced herein.

Voluntary Contributions.—Members obtaining positions through the medium of this Service are invited to co-operate with the Societies in the financing of the work by nominal contributions made within thirty days after placement, on the basis of \$10 for all positions paying a salary of \$2 000 or less per annum; \$10 plus 1% of all amounts in excess of \$2 000 per annum; temporary positions (of one month or less), 3% of total salary received. The income contributed by the members, together with the finances appropriated by the four Societies named, will be sufficient, it is hoped, not only to maintain but to increase and extend the service.

Replies to Announcements.—Replies to announcements published herein, or in the Bulletin, should be addressed to the key number indicated in each case, with a two-cent stamp attached for re-forwarding, and forwarded to the Employment Service at the address given. Replies received by the Service after the positions to which they refer have been filled, will not be forwarded.

CONSTRUCTION DRAFTSMAN AND ENGINEER, Assoc. M. Am. Soc. C. E., desires connection with engineering, architectural, or construction firm. Capable of designing, detailing reinforced concrete, steel and heavy timber for buildings, light structures, retaining walls, etc.; making neat architectural plans, details, and writing specifications, estimating materials, labor, cost, etc., and supervising construction. Has served apprenticeship as carpenter and cabinet maker. A-1570.

PROFESSOR OF CIVIL ENGINEERING, M. Am. Soc. C. E., desires position for summer. Twenty-one years' experience in teaching, executive and technical practice along survey, railway, irrigation, drainage, and hydro-electric lines. Can handle promotion, sales, surveys, design, construction, bidding and estimating, statistics, reports, and executive duties. A-1584.

PAPER MILL ARCHITECT AND ENGINEER, Assoc. M. Am. Soc. C. E.; age 41;

married. Experienced in paper, ground-wood, sulphite and sulphate mills, steam power plants, and hydraulic developments. Location, New York City. B-4177.

SPECIALIST IN HIGHWAY ENGINEERING. M. Am. Soc. C. E., S. B. in Civil Engineering, Mass. Inst. Tech.; post-graduate work in highway engineering and engineering administration at Mass. Inst. Tech. Twelve years' experience, primarily highway construction. Present salary \$5 000 as executive engineer. Desires new connection preferably with contractor. Location immaterial. B-6574.

EXECUTIVE - SUPERINTENDENT - CONSTRUCTION ENGINEER-SALES ENGINEER. Thirty years' broad experience in United States and abroad, with exceptional and responsible charge of large projects of construction and maintenance on power plants, dams, highway construction, sewage disposal plants, sanitary and storm sewers, water-works, harbor and channel work; valuations and utilities, reports and estimates. Salary open if permanent position available. Best of references furnished. B-7722.

ASSISTANT PROFESSOR OF STRUCTURAL ENGINEERING. Assoc. M. Soc. C. E.; age 40; married. Practical experience and four years' teaching experience. Desires teaching position in North or Central Atlantic States. B-8524.

CONSTRUCTION ENGINEER. Jun. Am. Soc. C. E.; age 24; married. Eight months in charge, subdivision development, sewers, streets, surveying, etc. More than one year in building design and construction, with some street and interurban railway track layout and construction with utility. Now superintending construction concrete, steel, and brick building. Available in two weeks. Location, anywhere. B-8962.

GRADUATE CIVIL ENGINEER. Assoc. M. Am. Soc. C. E. Fifteen years' varied experience, drainage, highways, highway bridges, streets, and pavements. Experience also includes municipal improvements, and work connected with general practice. Expert at land survey and subdivision work. Accustomed to dealing directly with public. Widely experienced in supervising construction. Location preferred, Middle or Atlantic States. Salary, \$3 000-\$4 200. C-1106.

MEMBER OF GRADUATING CLASS OF THE Johns Hopkins University in Civil Engineering, desires work in a Southern State. Has had slightly over six months of practical experience as Transitman and Draftsman with topographical survey party. C-1249.

ENGINEER-SUPERINTENDENT - CONSTRUCTION. Assoc. M. Soc. C. E.; age 39; married. Executive engineer, design, construction, costs, and operation. Sixteen years' experience mechanical, general civil, hydraulic, and sales. Four years in Tropics and Orient as contractor's superintendent. Location, Southwest. Available two weeks. C-1250.

GRADUATE CIVIL ENGINEER. Mass. Inst. of Technology, Assoc. M. Am. Soc. C. E.; age 30; married. Six years' experience on work pertaining to hydro-electric developments, as designer and resident engineer. At present, resident engineer on hydro-electric development in Northern New York State. Now engaged but will be available on short notice. C-1251.

INSTRUCTOR IN CIVIL ENGINEERING. Jun. Am. Soc. C. E.; Degrees B. S. E. (C. E.) and M. S. E. (C. E.). Surveying, highway, and municipal engineering. Desires position in Middle West in surveying, construction, or sales work for summer vacation. C-1285.

EXECUTIVE-ENGINEER, graduate civil engineer; age 38; married. Seventeen years' practical construction, maintenance, purchasing, and sales experience, twelve in responsible charge of work and men. Position of responsibility desired, general upkeep, involving water and sewage problems. Available on short notice. Location, New York City or within 100 miles. C-1300.

GRADUATE CIVIL ENGINEER. Jun. Am. Soc. C. E.; age 27; single. Five years' experience: One year in construction work, two in structural steel, and two in land development, including surveys, map work, sea-wall design, pile-driving, etc. Location for past nine months has been in Florida with \$300 monthly salary. Location is secondary, most important is something permanent. Can give good references. C-1334.

GRADUATE CIVIL AND HYDRAULIC ENGINEER. Assoc. M. Am. Soc. C. E. Ten years of active practice in survey, design, and construction of hydro-electric, irrigation, highway, and municipal engineering. For the last three years chief engineer of the largest mountain resort development in Southern California. Wants responsible position as office, field, or construction engineer. C-1386-5-A-20.

CIVIL ENGINEER. Assoc. M. Am. Soc. C. E., B. S., C. E.; age 29; married. Ten years' professional experience in design and construction of all types of buildings, both private and public, including 165 000 000 gal. per day filtration plant for the City of Cleveland as engineer of design. More than three years' executive experience. Engaged in private practice at present time. Seeks executive engineering position with engineering and construction company. Can arrange personal interview. Available on short notice. C-1440.

ENGINEERING EXECUTIVE. Assoc. M. Am. Soc. C. E.; Assoc. M. Eng. Inst. Canada; American, Scotch descent; age 40; married. Last two years in full charge, Canadian office of large American utility company, as confidential manager. In previous position seven years. Experienced as chief draftsman, construction superintendent, and private secretary. Prefers office position in East. Salary about \$4 000. Clean record and references. C-1616.

Membership

(From April 7, to June 29, 1926)

Additions

	Date of Membership.
ABRAHAM, Harry. Constr. Supt. and Mgr., Normaleys Bldg. Co., Jamaica (Res., 131 East 110th St.), New York, N. Y.	Jun. April 12, 1926
ALCOTT, Frank Hart, Jr. Asst. to Cons. Engr., The National Board of Fire Underwriters, 85 John St., New York (Res., 84 Irving Ave., Floral Park), N. Y.	Assoc. M. April 12, 1926
ALLEN, Ralph Waldo. Chf. Engr., Thompsons & Clark Timber Co., Ltd., 1633 Thirty-Fourth Ave., Seattle, Wash.	M. Dec. 14, 1925
ANTHONY, Sidney Stewart. 1082 Union St., Manchester, N. H.	Jun. June 7, 1926
APPLEFORD, Carl Williams. Care, Pacific Gas & Elec. Co., 245 Market St., San Francisco, Calif.	Assoc. M. April 12, 1926
ATKINSON, William Patterson. Transitman and Gen. Asst. Engr., Day & Zimmermann, Inc., Saxton, Pa.	Jun. Dec. 14, 1925
BACCA, Joseph Paul. City Engr. (Res., 605 Pine St.), Trinidad, Colo.	Jun. Dec. 14, 1925
BAILEY, Williams Dunlavy. 29 Odell Ave., White Plains, N. Y.	Jun. Dec. 14, 1925
BALL, John Wesley. Highway Engr., Bureau of Public Roads, U. S. Dept. of Agriculture, 401 Bay Bldg., San Francisco, Calif.	Assoc. M. July 11, 1921 M. Mar. 15, 1926
BALL, Samuel Sloman. Junior Civ. Engr., City of Los Angeles, 1607 One Hundred and Tenth Ave., Sawtelle, Calif.	Jun. Dec. 14, 1925
BARAHONA Muñoz, Clemente. Asst. Hydr. Engr., Braden Copper Co., Rancagua (Coya), Chile.	Assoc. M. Mar. 15, 1926
BELL, Gilbert Algernon. Engr., Box 327, Northwood Station, West Palm Beach, Fla.	Assoc. M. June 7, 1926
BENNETT, Archibald. Draftsman and Estimator, Alabama Power Co., Birmingham, Ala.	Jun. June 7, 1926
BERGLUND, Gustaf Eric. Structural Designer, San. Dist. of Chicago (Res., 638½ Cornelia Ave.), Chicago, Ill.	Assoc. M. June 7, 1926
BESTOR, Horace Anderson. Res. Engr., Calcoosahatchee Impvt. Dist., La Belle, Fla.	Assoc. M. April 12, 1926
BIEG, Henry Conrad. Community Hotel Site, Fort Myers, Fla.	Jun. Dec. 14, 1925
BIRMAN, Herman. Topographical Draftsman, Office of Pres., Borough of Brooklyn, 1042 Faile St., New York, N. Y.	Jun. Mar. 15, 1926
BORROWMAN, Ralph Emerson. Office and Designing Engr., Dept. of Public Works, St. Petersburg, Fla.	Assoc. M. Jan. 18, 1926
BOSSO, Oliver Robert. Asst. Engr., George A. Posey, 4828 Telegraph Ave., Oakland, Calif.	Jun. Mar. 15, 1926
BRADSHAW, Charles. Cons. Engr. (Salsbury, Bradshaw & Taylor), 743 Petroleum Securities Bldg., Los Angeles, Calif.	Assoc. M. Nov. 6, 1907 M. April 12, 1926
BREWER, Reginald Osborne. Engr., Underpinning & Foundation Co. (Res., 555 West 186th St.), New York, N. Y.	Jun. June 7, 1926
BRITTON, William Rothrock. Asst. Engr., Bridge Constr., State Highway Comm., Knightstown, Ind.	Assoc. M. Jan. 18, 1926
BROWN, Darwin Grant. Secy. and Gen. Supt., The C. R. Cummins Co., St. Augustine, Fla.	Jun. Oct. 15, 1923 Assoc. M. April 12, 1926
BROWN, Ernest Mack. Mgr. and Engr., R. W. Brown & Co., Box 253, Princeton, W. Va.	Assoc. M. June 7, 1926
BROWN, Frank Elam. Chf. Structural Engr., Holabird & Roche, 1400 Monroe Bldg., Chicago, Ill.	M. April 12, 1926
BRUN, Aage. Varick House, 11 Dominick St., New York, N. Y.	Jun. June 7, 1926
BUCKNER, Floyd King. Estimating Engr., P. O'B. Montgomery, 808½ Commerce St., Dallas, Tex.	Jun. June 7, 1926 Jun. June 24, 1914 Assoc. M. April 18, 1916 M. Mar. 15, 1926
BUELL, William Elijah, Jr. Cons. Engr., Associated with Ralph Schneeloch, 716 East 18th St., North, Portland, Ore.	M. Mar. 15, 1926
BURKE, William Charles. Chf. Engr., State Board of Drainage, Irrig. and Reclamation (Res., 912 West 17th St.), Oklahoma City, Okla.	M. April 12, 1926
BUSFIELD, James Leonard. Cons. Engr. (Beaubien, Busfield & Co.), 2 Place d'Armes, Montreal, Que., Canada.	M. April 12, 1926
BUTTS, Clarence Williamson. Special Engr., Dept. of Highways and Public Works (Res., 115-B Lyle Ave.), Nashville, Tenn.	M. Mar. 15, 1926
BUX, Albert Clarence. Project Engr., State Highway Dept., 1332 Central Ave., North Topeka, Kans.	Assoc. M. Mar. 15, 1926
CADE, Claude Marshall. Associate Prof., Civ. Eng., Michigan State Coll. of Agriculture, Box 624, East Lansing, Mich.	Assoc. M. April 12, 1926
CAMPBELL, Paul Caldwell. Gen. Mgr. in Colombia, Ulen & Co., Apartado 258, Bogota, Colombia.	Jun. May 6, 1914 Assoc. M. April 17, 1917 M. Jan. 18, 1926
CARTWRIGHT, Frank Poole. Technical Representative, National Lumber Mfrs. Assoc. (Res., 3720 Jocelyn St.), Washington D. C.	Assoc. M. April 12, 1926

MEMBERSHIP—(Continued)

Date of
Membership.

CASSIL, Armond. Railroad Contr. (Res., 2535 West Grand Boulevard), Detroit, Mich.	Jun.	June 7, 1926
CHAPIN, Richard Norman. With R. W. Hebard, San Salvador, Salvador.	Jun.	Mar. 15, 1926
CLARK, Jay Hobart Francis. Asst. Engr., The Connecticut Co., New Haven, Conn.	Assoc. M.	April 12, 1926
CLAUSEN, Chester Kessler. Computer, City of Seattle (Res., 958 Twenty-first Ave.), Seattle, Wash.	Jun.	April 12, 1926
CONE, Russell Glenn. Res. Engr., Central Section, Delaware River Bridge Joint Comm., 228 North Delaware Ave., Philadelphia, Pa.	Jun.	Dec. 4, 1922
CONNER, Irl Eugene. First Vice-Pres., V. V. Long & Co., 1300 Colcord Bldg., Oklahoma City, Okla.	Assoc. M.	Jan. 18, 1926
CORTELYOU, Herman Polhemus. Engr. of Constr., City Engr.'s Office (Res., 1755 West 39th St.), Los Angeles, Calif.	Assoc. M.	Mar. 15, 1926
COTTINGHAM, William Patrick. City Civ. Engr. (Res., 1534 West 5th Ave.), Gary Ind.	M.	April 12, 1926
COWLES, Martin Warren. San. Engr., 82 Mill Plain Rd., Fairfield, Conn.	Jun.	April 14, 1919
COX, Robert Roy. County Highway Engr., Calhoun County; Res. Engr., State Highway Dept., 728 West Michigan Ave., Marshall, Mich.	Assoc. M.	June 7, 1926
CRANDALL, James Stuart. Treas. and Engr., The Crandall Eng. Co., 102 Border St., East Boston, Mass.	Assoc. M.	Mar. 15, 1926
CROM, John Maurice. Dist. Engr., Cement Gun Co., Inc., 549 West Washington St., Chicago, Ill.	Assoc. M.	June 7, 1926
CROSS, Edgar Algernon. Structural Engr., Albert Kahn, Detroit, Mich. (Res., 725 May Ave., Windsor, Ont., Canada)	Assoc. M.	Dec. 14, 1925
CURTIS, James Eugene. Supt., Washington Aqueduct and Filtration Plant, Filtration Plant, Washington, D. C.	Assoc. M.	April 30, 1912
CUTTER, Howard Davis, Jr. Engr., South Eastern Underwriter's Assoc., Box 1743, Atlanta, Ga.	M.	April 12, 1926
DAVIS, William Edward. City Engr. of Skiatook; with Hughes Eng. Co., 219 Cole Bldg., Tulsa, Okla.	Jun.	Sept. 9, 1919
DAY, Willard Farnsworth. City Mgr. and City Engr., Staunton, Va.	Assoc. M.	Mar. 7, 1921
D'ESPOSITO, Joshua. Chf. Engr. and Acting Gen. Mgr., Chicago Union Station Co., 517 West Adams St., Room 288, Chicago, Ill.	M.	April 12, 1926
DEUPREE, Elijah Julius. Instrumentman, Myers & Noyes, 1107 Mercantile Bldg., Dallas, Tex.	Assoc. M.	Mar. 12, 1923
DILLMAN, Grover Cleveland. Deputy Commr.-Chf. Engr., State Highway Dept., Lansing, Mich.	M.	April 12, 1926
DODGE, Russell Alger. Asst. Prof., Eng. Mechanics, Univ. of Michigan (Res. 333 East Huron St.), Ann Arbor, Mich.	Assoc. M.	Jan. 18, 1926
DORAN, Walter Edmund. Engr., Rio de Janeiro City Impvt. Co., Ltd., Caixa 403, Rio de Janeiro, Brazil.	Assoc. M.	Mar. 15, 1926
DUFFY, John Paul. Engr., Carl G. Fisher Properties, Fisher Bldg., Miami Beach, Fla.	Assoc. M.	June 7, 1926
DURKEE, E. Leland. Estimator and Designer, Eng. Dept., McClintic-Marshall Co. (Res., 904 Miami Ave., South Hills Station), Pittsburgh, Pa.	Assoc. M.	April 12, 1926
EASTMAN, Frederick Earl. Asphalt Sales Engr., Standard Oil Co., San Francisco (Res., 2465 Forty-first St., Sacramento), Calif.	Affiliate	June 7, 1926
EATON, Clarence Gordon. Junior Asst. Engr., Niagara Frontier Planning Board, Tonawanda (Res., 394 Tremont St., North Tonawanda), N. Y.	Jun.	June 7, 1926
ECKLES, Robert Arthur. Archt. (W. G. Eckles Co.), L. S. & T. Bldg., New Castle, Pa.	Jun.	July 9, 1923
ELDER, Clayburn Combes. Asst. Engr., U. S. Bureau of Reclamation, 1441 Welton St., Denver, Colo.	Assoc. M.	June 7, 1926
ENGELHART, Julius Carl. Estimator, J. L. Murrell Co., 45 East 17th St., New York (Res., 112-07 Ninety-first Ave., Richmond Hill), N. Y.	Assoc. M.	April 12, 1926
ENTREKIN, Lyle MacDonald. Asst. Engr., Bethlehem Steel Co. (Res., 635 Sixteenth Ave.), Bethlehem, Pa.	M.	June 7, 1926
EPPERSON, Erle Russell. Associate Highway Engr., U. S. Bureau of Public Roads, Box 779, Jackson, Miss.	Assoc. M.	Dec. 14, 1925
ERICKSON, Edwin Theodore. 40 Walnut St., Wellsboro, Pa.	Jun.	June 7, 1926
ESHBAUGH, Clifford Wayne. Asst. to County Engr., Cowley County, 1201 Fuller St., Winfield, Kans.	Jun.	June 7, 1926
EVANS, Frederick James. Instr., Carnegie Inst. of Technology (Res., 5710 Rippey St.), Pittsburgh, Pa.	Assoc. M.	Oct. 15, 1923
EVANS, Leonard Thomas. Draftsman, L. & N. R. R., 1614 Indiana Ave., New Albany, Ind.	M.	April 12, 1926
FAISON, Haywood Renick. Dist. Engr., Mees & Mees, Box 501, Hendersonville, N. C.	Jun.	April 12, 1926
FILES, Earl Lufkin. 10 Bonafacia Pl., Monterey, Calif.	Jun.	June 7, 1926

MEMBERSHIP—(Continued)		Date of Membership.
FLOYD, Richard Archibald. Chf. Engr., Southlands Corporation, Third at Plaza, San Diego, Calif.	Assoc. M.	Mar. 15, 1926
FORREST, Thomas Carr, Jr. Civ. Eng. (Forrest Eng. Co.), Waxahachie, Tex.	Assoc. M.	June 7, 1926
FOSTER, Willard Stillwell. 161 Ridge Rd., Rutherford, N. J.	Jun.	June 1, 1920
FREEMAN, George Leonard. Chf. Engr., The Foundation Co., 120 Liberty St., New York (Res., 335 Rich Ave., Mount Vernon), N. Y.	Assoc. M.	June 7, 1926
FREEMAN, Lawrence Stephen. 126 Olean St., East Aurora, N. Y.	M.	June 7, 1926
FREESE, Simon Wilke. Associated with John B. Hawley, 403 Cotton Exchange Bldg., Fort Worth, Tex.	Jun.	Oct. 12, 1925
FRIENDLY, Hugo Henry. Asst. Engr., New York Bridge & Tunnel Comm. (Res., 1963 Daly Ave.), New York, N. Y.	Jun.	April 3, 1922
FRY, William Clinton, Jr. First Asst. Engr. to Clarence W. Hudson, 427 Windsor St., Reading, Pa.	Assoc. M.	June 7, 1926
GIBBS, Sherman William. Asst. Engr. to Francis Betts Smith, 58 Sutter St., Room 350, San Francisco, Calif.	Assoc. M.	Jan. 18, 1926
GIDEON, Francis Clyde. Cons. Engr. for Harold Tatum, 61 Arcade Bldg., Columbia, S. C.	M.	April 12, 1926
GOLDEN, Edward Wright. (H. W. Golden & Son, Inc.) (Res., 3 Burdette Ave.), Troy, N. Y.	Assoc. M.	June 7, 1926
GOULD, Fletcher Amos. Instr. and Asst. Prof., Civ. Eng., Michigan State Coll. (Res., 508 Grove St.), East Lansing, Mich.	M.	April 12, 1926
GRAHAM, George Archibald. Cons. Engr., Nelson Bldg. (Res., 219 Second Ave.), Daytona, Fla.	Assoc. M.	April 12, 1926
GRANT, Eugene Lodewick. Asst. Prof., Civ. Eng., Montana State Coll. (Res., 401 South Black Ave.), Bozeman, Mont.	Assoc. M.	Aug. 9, 1920
GREAVES, Andrew Valerian. Care, Vaughan Engrs., 185 Devonshire St., Boston, Mass.	M.	April 12, 1926
GREEY, Elmer Bloomfield. Estimator, Matthews Constr. Co., Inc. (Res., 54 Patton Ave.), Princeton, N. J.	Jun.	June 7, 1926
GREISSER, Victor Hugo. Chf. Engr., The Washington Water Power Co. (Res., 928 West 17th Ave.), Spokane, Wash.	Jun.	June 7, 1926
HALE, Harold Winslow. 410 North 8th St., Allentown, Pa.	M.	Mar. 15, 1926
HALLEY, Henry Clay. Sales Promotion, Standard Oil Co., 5630 Delmar Ave., St. Louis, Mo.	Jun.	Dec. 14, 1925
HALLORAN, Edwin Francis. Pres., Cement Gun Constr. Co. of California, 58 Sutter St., San Francisco, Calif.	Assoc. M.	Dec. 14, 1925
HAMBRECHT, Albert Lewis. Div. Engr., State Highway Comm., Capitol Annex, Madison, Wis.	Assoc. M.	June 7, 1926
HAMILTON, Peter Davidson Gunn. 14 Beacon St., Boston, Mass.	M.	April 12, 1926
HANNA, William John. Care, Northern Banking Co., Belfast, Ireland.	Jun.	Feb. 4, 1913
HARRISON, Frank Earle. City Engr. (Res., 960 Wendell Ave.), Schenectady, N. Y.	Assoc. M.	Sept. 12, 1916
HASZARD, Henry Vivian Moore. Res. Engr., Wanganui Harbor Board, Box 35, Wanganui, New Zealand.	M.	April 12, 1926
HEIMBUECHER, Walter Alexander. City Engr., University City, 6618 Delmar Boulevard, St. Louis, Mo.	Assoc. M.	Mar. 15, 1926
HELICK, Reuben Harold. Maintenance Engr., Dept. of Public Works, Allegheny County; 312 Locust St., Swissvale, Pa.	Assoc. M.	April 17, 1917
HELLYER, Henry Amyatt Chaundy. Chf. Engr., Tenafly Lumber Supply Co., Box 714, Tenafly, N. J.	M.	April 12, 1926
HERBER, John LeRoy. Dist. Engr., State Highway Dept., 551 Century Bldg., Pittsburgh, Pa.	M.	Dec. 14, 1925
HERRICK, Clinton Seymour. Senior Asst. Engr. to City Engr., 569 Cumberland Ave., Syracuse, N. Y.	Assoc. M.	Mar. 13, 1917
HICKERSON, Thomas Felix. Prof., Civ. Eng., Univ. of North Carolina, Chapel Hill, N. C.	M.	April 12, 1926
HILL, William Beans. Asst. Engr., Florida East Coast Ry., Roseland, Fla.	Jun.	April 12, 1926
HOPPER, James Spencer. Care, Ferrocarril Sud-Pacifico de Mexico, Empalme, Sonora, Mexico.	Jun.	Mar. 15, 1926
HOWAT, Philip Yvone Kirkpatrick. 1041 St. Paul St., Baltimore, Md.	Assoc. M.	June 7, 1926
HOYT, Kendall King. Care, U. S. Geological Survey, 704 Journal Bldg., Albany, N. Y.	Jun.	June 7, 1926
HUBBARD, Frank James. 203 Park Ave., Plainfield, N. J.	M.	April 12, 1926
HUNTINGTON, Whitney Clark. Prof., Civ. Eng. and Head, Civ. Eng. and Constr. Depts., Univ. of Colorado (Res., 844 Fourteenth St.), Boulder, Colo.	Assoc. M.	April 7, 1915
IRWIN, Gifford Melville. Engr. with City of Vancouver (Res., 416 Seventeenth Ave., W.), Vancouver, B. C., Canada.	M.	Jan. 18, 1926
JAHLSTROM, Ilmar Oscar. Instrumentman, State Highway Dept. (Res., 764 South 40th St.), Tacoma, Wash.	Assoc. M.	June 7, 1926
	Jun.	Mar. 15, 1926

MEMBERSHIP—(Continued)

	Date of Membership.
JAMIN, Frank Charles. Junior Engr., Constr. Dept., N. Y. C. R. R., 602 West 180th St., New York, N. Y.	Jun. Mar. 15, 1926
JEWETT, John Quincy. 3935 Tenth St., San Diego, Calif.	Jun. June 7, 1926
JOHNSTON, Josiah Raymond. Asst. Supt., Constr. and Repair, City of St. Paul, 301 Court House, St. Paul, Minn.	M. April 12, 1926
JOHNSTON, Roy Nelson. Box 317, Courtland, Ala.	Jun. June 7, 1926
JONGE, Albert Edward Richard de. Draftsman, Shanghai Municipal Electricity Dept. (Res., 23 Yu Yuen Rd.), Shanghai, China.	Assoc. M. Mar. 15, 1926
JORGENSEN, Jorgen Kavile. Designing Draftsman, The California Oregon Power Co., Medford, Ore.	Jun. Mar. 15, 1926
KANE, Laurence Joseph. 3320 Ft. Independence St., New York, N. Y.	Jun. April 12, 1926
KAREKIN, Yazuhan Mardig. Cons. Engr., 136 Liberty St., New York, N. Y.	M. June 7, 1926
KARO, Henry Arnold. Lyons, Neb.	Jun. Mar. 15, 1926
KEESE, Oliver de la Vergne. Engr., Los Angeles County Surveyor's Office, 700 Hall of Records, Los Angeles, Calif.	Assoc. M. June 7, 1926
KEIM, Paul Ferdinand. 4552 Fountain Ave., Hollywood, Calif.	Jun. Oct. 12, 1925
KERSHAW, Phillip Frank. Civ. Engr., New York Edison Co., 8727 One Hundred and Sixty-fifth St., Jamaica, N. Y.	Jun. Dec. 15, 1924
KIMMICH, Frederick Anthony. Archt.'s Asst. Supt., Albert Kahn, Inc. (Res., 2519 Seminole Ave.), Detroit, Mich.	Assoc. M. June 7, 1926
KITTREDGE, Raymond Brown. Prof., Transportation Eng., State Univ. of Iowa, 630 South Governor St., Iowa City, Iowa.	Jun. April 12, 1926
KLYCE, Paul Cage. Constr. and Res. Engr., M. L. Culley, Box 373, Natchez, Miss.	Assoc. M. Feb. 4, 1914
KNOTT, Virgil Proctor. Civ. Engr., 407 Home Insurance Bldg. (Res., 2011 West 17th St.), Little Rock, Ark.	M. April 12, 1926
KOCH, Victor George. 304 South Broadway, Corpus Christi, Tex.	M. Dec. 14, 1925
	Jun. July 9, 1923
	Assoc. M. April 12, 1926
LAKE, J. Horace. Res. Engr., State Highway Comm., Custer, S. Dak.	Assoc. M. April 12, 1926
LARSON, Roy Edwin. Insp., Western Elec. Co., Inc., 650 East 29th St., Brooklyn, N. Y.	Jun. Mar. 15, 1926
LECLERCQ, Emile Paul. Chf. of Party, McClave & McClave, 232 Knox Ave., Grantwood, N. J.	Jun. Mar. 15, 1926
LEDBETTER, John Jackson, Jr. 1015 South Mesquite St., San Antonio, Tex.	Jun. June 7, 1926
LEFEBVRE, Olivier Odilon. Chf. Engr., The Quebec Streams Comm., 59 Notre Dame St., East, Montreal, Que., Canada.	M. April 12, 1926
LEWIS, George Draper. Asst. Engr., Eng. Dept., N. Y. C. R. R., Room 12, Union Station, Albany, N. Y.	Assoc. M. Aug. 31, 1925
LEWIS, Ralph Webster. Draftsman, Alabama Power Co., Birmingham, Ala.	Jun. April 12, 1926
LI, Shu-T'ien. 212 Fall Creek Drive, Ithaca, N. Y.	Jun. April 12, 1926
LOEWUS, Julian Simeon. Care, C. C. Whitaker, 616 Bona Allen Bldg., Atlanta, Ga.	Jun. April 12, 1926
LOHR, Lenox Riley. Capt., Corps of Engrs., U. S. A.; Editor, <i>The Military Engineer</i> , Room 810, Mills Bldg., Washington, D. C.	Jun. April 12, 1926
LORIOT, Albert Paul. Asst. Engr., Hazen & Whipple, 25 West 43d St., Room 1902, New York, N. Y.	Assoc. M. June 7, 1926
LOY, Howard Milton. Asst. State Highway Engr., Dept. of Highways, Carson City, Nev.	Assoc. M. June 7, 1926
LUBKE, Walter Friedrich. Eng. Asst., Public Service Production Co., Newark (Res., 209 Vine St., Elizabeth), N. J.	Jun. April 12, 1926
McAULIFFE, Joseph Roy. Pres., J. Roy McAuliffe, Inc., 212 First National Bank Bldg., Longview, Wash.	Assoc. M. June 7, 1926
McCLELLAND, George W. Eng. Div., Water Dept., City Hall, Kansas City, Mo.	Jun. April 14, 1919
McCLOURE, Harry C. Box 651, Miami Beach, Fla.	Assoc. M. April 12, 1926
McCURDY, Howard. City Engr., City of Vernon, Calif.; Civ. Engr. (Res., 4305 Santa Fe Ave.), Los Angeles, Calif.	Assoc. M. June 7, 1926
McKINNELL, Frederic Berkby. Supt., The Sharp Bros. Contr. Co., 605 Orear-Leslie Bldg., Kansas City, Mo.	Assoc. M. Sept. 11, 1917
MAEDER, Lloyd Alexander. 178 Stockbridge Ave., Buffalo, N. Y.	M. April 12, 1926
MARSH, Clarence Spencer. 7137 Guilford Rd., Stonehurst Hills, Upper Darby, Pa.	Jun. Dec. 14, 1925
MASSEY, Thomas Holland. Reconstruction Engr., State Highway Dept., 130 Summitt Ave., Macon, Ga.	Jun. April 12, 1926
MILLER, Charles Alexander. Pres., The Sterling Eng. Co. (Res., 12435 Phillips Ave.), Cleveland, Ohio.	Assoc. M. June 7, 1926
MILLER, George Warren. Structural Engr., 626 Laughlin Bldg. (Res., 3523 La Clede Ave.), Los Angeles, Calif.	Assoc. M. April 12, 1926
MINCIS, Natalio Noel. Structural Designer, The Cooling Tower Co., Inc., 15 John St., New York (Res., 1455 St. Johns Pl., Brooklyn), N. Y.	Jun. June 16, 1924
	Assoc. M. Dec. 14, 1925
	Jun. June 7, 1926

MEMBERSHIP—(Continued)		Date of Membership.
MITRA, Surendra Nath. Room 517, Y. M. C. A., Des Moines, Iowa.....	Jun.	Dec. 14, 1925
MORRILL, Robert Wesley. Senior Topographical Draftsman, San Sewer Div., Eng. Dept., City of Los Angeles, 220 Newland St., Los Angeles, Calif.....	Jun.	April 12, 1926
MOSS, David. Junior Engr., Purdy & Henderson Co., 45 East 17th St. (Res., 528 West 111th St.), New York, N. Y.....	Jun.	June 7, 1926
MOYER, Robert Raymond. Constr. Supt., Raymond Concrete Pile Co., 140 Cedar St., New York, N. Y. (Res., 940 Kenyon Ave., Plainfield, N. J.).....	Jun.	June 7, 1926
MUDGE, Grant Elkanah. Insp. under City Engr. (Res., 403 Geneva Ave.), Highland Park, Mich.....	Jun.	April 12, 1926
MULLIKIN, Alfred. Town Engr., Northeast Harbor, Me.....	Assoc. M.	June 7, 1926
NAGEL, Charles August. Supt. on Constr., E. D. Otto (Res., 63 South Washington St.), Downers Grove, Ill.....	Assoc. M.	June 7, 1926
NELSON, Harold Arthur. Superv. Engr., Board of Library Commrs. (Res., 1009 South Plymouth Boulevard), Los Angeles, Calif.....	Assoc. M.	Mar. 15, 1926
NELSON, Nels Albert. Architectural Engr., 164 Harding Ave., Ironwood, Mich.....	Assoc. M.	June 7, 1926
NORDGREN, George Alvin. Contr. and Builder, 17 North La Salle St., Chicago, Ill.....	Jun.	Mar. 9, 1920
	Assoc. M.	June 7, 1926
OBERT, Russell Melvin. Draftsman, Pure Oil Co. (Res., 627 South Park Ave.), Columbus, Ohio.....	Jun.	April 12, 1926
OEGARD, Paul Nickolas. With W. H. Witt, 613 Seaboard Bldg. (Res., 4331 Twelfth Ave., N. E.), Seattle, Wash.....	Jun.	April 12, 1926
OLMSTED, Harry Francis. City Engr., Hawthorne (Res., 330 West Plymouth St., Inglewood), Calif.....	Assoc. M.	Mar. 15, 1926
OLSEN, Harry. Field Engr., The California Oregon Power Co., Medford, Ore.....	Assoc. M.	April 12, 1926
ORTOLANI, Walter Albert. Insp., Mississippi River Comm., 3d Dist., Box 404, Vicksburg, Miss.....	Jun.	June 7, 1926
PARISI, Francis Generous. 107 Jennings Arcade, Bradenton, Fla.	Jun.	June 7, 1926
PARSHALL, Ralph Leroy. Irrig. Engr., U. S. Dept. of Agriculture, 926 Akin Ave., Ft. Collins, Colo.....	Affiliate	Jan. 7, 1913
PATRICK, Freeman Vaughn. Lenox, Tenn.....	Assoc. M.	April 12, 1926
PATTON, William Waldo. Branch Mgr., Permanent Waterproofing Co., 625 Underwood Bldg., San Francisco, Calif.....	Jun.	Dec. 14, 1925
	Assoc. M.	June 7, 1926
PENA POLO, Jorge. Calle 17 No. 144, Bogota, Colombia.....	Jun.	Nov. 9, 1920
	Assoc. M.	Mar. 15, 1926
PENNYBACKER, Percy Vivian. Res. Engr., U. S. Engr. Office, Wilmington, Del.....	Jun.	April 3, 1922
	Assoc. M.	June 7, 1926
PERKINS, Henry Harvie. Care, Hollywood Dredging & Constr. Co., Box 575, Hollywood, Fla.....	Jun.	Dec. 14, 1925
PETERSON, Ivan Christian. Chf. Engr., Suhr & Berryman, 105 North Clark St. (Res., 2016 Home Ave.), Chicago, Ill.....	M.	April 12, 1926
PIATT, William McKinney. Designing and Superv. Engr., Box 521, Durham, N. C.....	M.	June 7, 1926
	Assoc. M.	Sept. 10, 1923
PITTS, Nelson Frederick, Jr. City Engr., Syracuse, N. Y.....	M.	April 12, 1926
PLANK, Ewart Gladstone. Lieut., Corps of Engrs., U. S. A., U. S. Engr. Office, Duluth, Minn.....	Assoc. M.	Mar. 15, 1926
PLOCK, Henry John. Draftsman and Estimator, Kalman Steel Co., 110 East 42d St. (Res., 1179 Third Ave.), New York, N. Y.....	Jun.	June 7, 1926
POPE, Herbert Bowman. Secy. and Treas., Taylor-Pope, Inc., 525 Collins Ave., Miami Beach, Fla.....	Assoc. M.	Mar. 15, 1926
PORTER, John Hart. Public Service Commr., Missouri Public Service Comm., State Capitol, Jefferson City, Mo.....	Assoc. M.	Sept. 12, 1921
	M.	April 12, 1926
RADBILL, Raymond. Constr. Supt., Good Roads Co., Inc., Upper Derby (Res., Moylan), Pa.....	Assoc. M.	June 7, 1926
READ, Henry English. Secy. and Treas., Rodgers & Read, 711 Realty Bldg., Louisville, Ky.....	Assoc. M.	April 12, 1926
REDINGTON, Thomas Gregory. Asst. Engr., The Barrett Co., 86 Bank St., New York, N. Y.....	Assoc. M.	Dec. 14, 1925
REYNOLDS, Kenneth Cass. Instr., Civ. Eng., Mass Inst. Tech., Cambridge A., Mass.....	Jun.	Mar. 15, 1926
RICE, Perley Augustus. Engr.-Accountant, Valuation Dept., Richmond, Fredericksburg & Potomac R. R., Richmond, Va.....	Assoc. M.	Mar. 15, 1926
RICHARDSON, George Bible. Div. Engr., Dept. of Public Works and Bldgs., State Div. of Highways, Dixon, Ill.....	Assoc. M.	Nov. 26, 1918
	M.	April 12, 1926
ROBERTS, Victor Jamison. Dist. Engr., Union Paving Co., 26 East Brown St., Norristown, Pa.....	Assoc. M.	June 7, 1926
ROBISON, Henry Omer. Asst. Engr., Atlanta & West Point R. R. (Res., 69 Albemarle Ave.), Atlanta, Ga.....	Assoc. M.	Mar. 15, 1926
ROSS, Tascar Alan. Lt.-Col., R. E. (Retired); Care, The Foundation Co., 120 Liberty St., New York, N. Y.....	M.	June 7, 1926
ROTHGERY, Lee Joseph. 421 Linden St., East Lansing, Mich.....	Assoc. M.	Mar. 15, 1926

MEMBERSHIP—(Continued)

Date of
Membership.

ROUNTHWAITE, Francis George. Res. Engr., Bermuda Development Co., Ltd., Tucker's Town, Bermuda.....	Assoc. M.	Mar. 15, 1926
RULLAN, Frank. Structural Draftsman and Designer, Gibbs & Hill, Pennsylvania Station, New York (Res., 109-93 Two Hundred and Fourth St., Hollis), N. Y.....	Jun.	June 7, 1926
SANDBECK, Hans Christian. 44 East 12th St., Bayonne, N. J.....	Jun.	June 7, 1926
SAURBREY, Kan Niels Godofred. Sewer Engr. for Stanley H. Wright, Box 504, Hendersonville, N. C.....	Assoc. M.	June 7, 1926
SCHILLER, George Alois. Asst. Engr., Regional Plan of New York and Its Environs (Res., 2493 Valentine Ave.), New York, N. Y.....	Assoc. M.	April 12, 1926
SCHUERMAN, William Augustus. Hydr. and Structural Designer, United Hudson Elec. Co., 50 Market St., Poughkeepsie N. Y.....	Jun. Oct.	15, 1923
SHAW, Clifton Raymond. Office Engr., S. P. Co. (Res., 121 Garfield St.), Lafayette, Ind.....	Assoc. M.	Oct. 12, 1925
SHUBIN, Sydney Abram. With Dept. of Public Works, Allegheny County (Res., 3038 Pinehurst Ave., Dormont), Pittsburgh, Pa.....	Assoc. M.	June 7, 1926
SIMPSON, Hawley Starr. Traffic Engr., Mayor's Committee on Traffic, 222 Police Headquarters, Detroit, Mich.....	Jun.	Mar. 15, 1926
SKARDON, Kenneth Bruner. Structural Designer, Cleveland Union Terminals Co. (Res., 19922 Eldora Rd., Ricky River Branch), Cleveland, Ohio.....	Assoc. M.	Mar. 15, 1926
SMARR, Roy Whittaker. Chf. Engr., Charleston-Interurban R. R., Box 1135, Charleston, W. Va.....	M.	June 7, 1926
SOWERS, George Bloomer. Engr.-Deputy Commr., Div. of Eng. and Constr., City of Cleveland, 618 City Hall, Cleveland, Ohio.....	Assoc. M.	June 7, 1926
STAMM, Hans Rudolf. Archt. for Barron G. Collier, Box 796, Punta Gorda, Fla.....	M.	April 12, 1926
STANTON, William Frank. Mgr. in Chile, S. Pearson & Son Co., Ltd., Casilla 1004, Valparaiso, Chile.....	Assoc. M.	Jan. 14, 1913
STARKEY, Harry Nicholl. Care, H. M. Byllesby Co., 231 South La Salle St., Chicago, Ill.....	M.	April 12, 1926
STEAD, Arthur John. Care, Laguna Beach County Water Dist., Laguna Beach, Calif.....	Assoc. M.	June 7, 1926
STEEL, George Graham. Treas., Warren Brothers Co. of Argentina, Escriorio 129, Edificio Banco de Boston, Buenos Aires, Argentine Republic.....	Assoc. M.	Aug. 9, 1920
SWASICK, Wade Woods. City Engr. (Res., 326 Holliday St.), Michigan City, Ind.....	M.	April 12, 1926
TAYLOR, Ralph Tower. Engr. and Gen. Constr. Supt., W. A. Taylor & Sons, 32 West Union St. (Res., 1055 North Lake Ave.), Pasadena, Calif.....	Assoc. M.	June 7, 1926
TELLER, Leslie Wayne. Engr. of Tests, U. S. Bureau of Public Roads (Res., 1317 Jackson St., N. E.), Washington, D. C.....	Assoc. M.	April 12, 1926
TERRELL, Daniel Volers. Prof., Civ. Eng., Univ. of Kentucky, Lexington, Ky.....	Assoc. M.	Jan. 13, 1919
THOMAS, James Henry. Asst. Engr., State Bureau of Highways, Box 733, Cobleskill, N. Y.....	M.	April 12, 1926
TILLOTSON, Miner Raymond. Engr., U. S. National Park Service, Grand Canyon National Park, Grand Canyon, Ariz.....	Assoc. M.	June 7, 1926
TRABER, Charles Kuno. Chf. Engr. and Mgr., Tramway Dept., A. Leschen & Sons Rope Co., 458 East Jackson Rd., Wenster Groves, Mo.....	Assoc. M.	June 7, 1926
TURPIN, Upshur Farrington. Office Engr., Consoer, Older & Quinlan, 140 South Dearborn St., Room 1742, Chicago, Ill.....	M.	Mar. 15, 1926
UPTON, Thomas Haynes. Eng. Member, Main Roads Board of New South Wales, 301 Castlereagh St., Sydney, New South Wales, Australia.....	Assoc. M.	Jan. 18, 1926
VOSS, Philip Lyon. 309 North Main St., Pleasantville, N. Y.....	Assoc. M.	Nov. 26, 1923
WALKER, Stanton. Director, Eng. and Research Div., National Sand & Gravel Assoc., 1045 Munsey Bldg., Washington, D. C.....	M.	Oct. 12, 1925
WALL, James Joseph. Cornell Club, 245 Madison Ave., New York, N. Y.....	M.	April 12, 1926
WEBER, Forrest Edward. Asst. Engr., City Engr.'s Office (Res., 3757 Meldrum Ave.), Detroit, Mich.....	Assoc. M.	Dec. 14, 1925
WEBB, Frederick Harrison. Asst. Engr., James H. Fuertes, 233 Broadway, Room 850, New York, N. Y.....	Assoc. M.	April 12, 1926
WEISER, Alexander Charles. Designer and Checker, Structural Steel Dept., Elec. Bond & Share Co., 65 Broadway (Res., 500 Riverside Drive), New York, N. Y.....	Assoc. M.	June 6, 1921
WEISMAN, Jacob. Estimator, S. Kandell (Res., 1151 Grand Concourse), New York, N. Y.....	M.	April 12, 1926
WHEELER, Arthur Chambers. Contr. and Engr. (Wheeler & Williams), Box 612, Hilo, Hawaii.....	Jun.	June 7, 1926
WHILDEN, Marian Newton. Care, Municipal Eng. Co., 1107 Athletic Club Bldg., Dallas, Tex.....	Assoc. M.	Oct. 7, 1908
	M.	April 12, 1926
	Jun.	June 7, 1926

MEMBERSHIP—(Continued)		Date of Membership.
WHITE, Benjamin. Gen. Contr. (White Constr. Co.), 11 Beacon St., Room 621, Boston, Mass.	Assoc. M.	April 12, 1926
WILDER, Robert Marquis. Structural Engr., Fred T. Ley & Co., Box 215, Jacksonville, Fla.	Jun.	April 12, 1926
WILLOUGHBY, William. Res. Engr., J. E. Greiner & Co., Box 551, St. Augustine, Fla.	Assoc. M.	June 7, 1926
WINSOR, Luther Murkins. Irrig. Engr., Utah Experiment Station, U. S. Dept. of Agriculture, Logan, Utah.	Assoc. M.	Mar. 15, 1926
WYCKOFF, Wayne Wellington. Tufunga, Calif.	Jun.	April 12, 1926
YDE, Niels Faddersboll. Draftsman, Pacific Gas & Elec. Co., 8 Grattan St., San Francisco, Calif.	Assoc. M.	Dec. 14, 1925

Reinstatements

MEMBERS	Date of Reinstatement.
CUNNINGHAM, John George Lawrence.	April 12, 1926
HULL, George Beckley.	April 12, 1926

ASSOCIATE MEMBERS

BERDEAU, Ray William.	June 11, 1926
CRENSHAW, Bernard Lee.	April 12, 1926
KISSACK, Alfred Broughton.	June 11, 1926
MILHOLLAND, Clarence Victor.	June 11, 1926
MUNN, Alexander Majors.	April 12, 1926
PHILLIPS, James Vernon.	June 11, 1926
SCHIMMELPFENNIG, Charles William.	June 11, 1926
SCHROEDL, Othello Henry.	June 11, 1926

Resignations

MEMBERS	Date of Resignation.
BYAM, Le Roy Henry.	June 11, 1926
HARDY, Edward Dana.	June 11, 1926
MARSH, James Barney.	April 12, 1926

ASSOCIATE MEMBERS

BERNHARD, John Helenus.	April 12, 1926
BROCKMEYER, Edwin John.	June 11, 1926
KENNEDY, Thomas B. II.	June 11, 1926
MORTON, Leon Lincoln.	June 11, 1926
WULZEN, Richard John.	June 11, 1926

AFFILIATES

CRAVEN, William Darcy, Jr.	June 11, 1926
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JUNIORS

NESSLER, Frederick Walter.	June 11, 1926
PEOTTER, George Edward.	June 11, 1926

Deaths

AERTSEN, Guillaem. Elected Member, October 1, 1890; died April 20, 1926.
ALBRIGHT, Henry Fleetwood. Elected Member, December 14, 1925; died May 11, 1926.
CREUZBAUR, Robert Walter. Elected Junior, April 2, 1890; Associate Member, April 4, 1894; Member, April 4, 1900; died June 1, 1926.
CUNNINGHAM, Andrew Oswald. Elected Member, February 5, 1902; died May 11, 1926.
DUCK, Allen Douglas. Elected Associate Member, September 12, 1916; Member, October 8, 1918; died June 3, 1926.
EDMONDSTONE, George Stovall. Elected Member, November 27, 1917; died March 23, 1926.
FERNALD, Clarence Thayer. Elected Member, October 7, 1908; died May 11, 1926.
FIELD, Harry Osborn. Elected Junior, December 15, 1924; died March 30, 1926.
FLOESCH, Jacob Martin. Elected Member, January 4, 1905; died May 25, 1926.

GIFFORD, George Edwin. Elected Associate Member, October 7, 1891; Member, January 1, 1896; died April 14, 1926.
 HELLER, George Edgar. Elected Associate Member, November 9, 1920; died March 16, 1926.
 HINCKLEY, Howard Vernon. Elected Member, December 5, 1883; died April 21, 1926.
 HOUSE, Francis Edwin. Elected Member, May 1, 1895; died April 3, 1926.
 McCLURE, Wilbur Fisk. Elected Member, December 14, 1925; died June 22, 1926.
 NAGEL, Herbert Lincoln. Elected Associate Member, September 9, 1919; died April 8, 1926.
 PHIPPS, Thomas Elmer. Elected Associate Member, October 3, 1911; Member, November 10, 1915; died February 22, 1926.
 PITKETHLY, David Thomas. Elected Associate Member, April 6, 1909; died April 21, 1926.
 RAYMOND, William Galt. Elected Member, October 3, 1894; died June 17, 1926.
 ROWLAND, Charles Leonard. Elected Member, September 1, 1886; died April 18, 1926.
 SHERMAN, Richard Willette. Elected Member, October 6, 1886; died May 23, 1926.
 SUMNER, Walter Augustus. Elected Member, January 17, 1921; died June 25, 1926.
 TAYLOR, Norton Longstreth. Elected Member, May 28, 1923; died February 21, 1926.
 THOMPSON, Henry Clark. Elected Member, February 4, 1903; died April 13, 1926.
 THOMSON, John. Elected Member March 2, 1887; died May 31, 1926.
 WILCOX, Clark Luzerne. Elected Junior, December 3, 1901; Associate Member, March 1, 1910; died March 11, 1926.
 WOODRUFF, Charles Curtis, Jr. Elected Junior, May 8, 1922; died May 4, 1926.
 YOUNG, Charles Griffith. Elected Affiliate, March 6, 1894; Member, March 8, 1921; died June 16, 1926.

Total Membership of the Society, June 29, 1926

Members	5 127
Associate Members	5 390
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Corporate Members	10 517
Honorary Members	15
Juniors	931
Affiliates	149
Fellows	8
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Total	11 620

GILFORD, George Edwin. Elected Associate Member, October 7, 1921; Member, January 1, 1922; died April 1, 1922.
 HILLIER, George Edgar. Elected Associate Member, November 9, 1920; died March 19, 1922.
 HINGKLEY, Howard Vernon. Elected Member, December 2, 1922; died April 21, 1926.
 HOUSE, Francis Edwin. Elected Member, May 1, 1922; died April 21, 1926.
 MCHUGH, William John. Elected Member, December 1, 1922; died June 12, 1926.
 NAGEL, Herbert Lincoln. Elected Associate Member, September 2, 1922; died April 2, 1926.
 PRUITT, Thomas Finley. Elected Associate Member, October 5, 1921; died November 10, 1922.
 RYAN, David Thomas. Elected Associate Member, April 6, 1922; died April 21, 1926.
 RAYMOND, William Earl. Elected Member, October 2, 1921; died June 14, 1926.
 ROWLAND, Charles Leonard. Elected Member, September 2, 1922; died April 21, 1926.
 SHERMAN, Richard Willard. Elected Member, October 6, 1922; died May 22, 1926.
 SUMNER, Walter Augustus. Elected Member, January 17, 1921; died June 20, 1926.
 TAYLOR, Norton Kenneth. Elected Member, May 22, 1922; died February 21, 1926.
 THOMPSON, Henry Clark. Elected Member, February 4, 1922; died April 12, 1926.
 THOMPSON, John. Elected Member, May 2, 1922; died May 21, 1926.
 WILCOX, Clark Lincoln. Elected Member, December 2, 1921; died March 4, 1926.
 WOODBURY, Charles Curtis. Elected Member, May 2, 1922; died May 4, 1926.
 YOUNG, Charles Graham. Elected Associate Member, March 6, 1922; died March 4, 1926.

Total Membership of the Society, June 20, 1926

Members	5127
Associate Members	2390
Corporate Members	10217
Honorary Members	12
Juniors	931
Affiliates	149
Fellows	2
Total	11620